NPS Form 10-900 OMB No. 1024-0018 (Expires 5/31/2012)

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name Waterloo Village (Boundary Increase #1 and Additional Documentation)

other names/site number Andover Forge

2. Location

street & number Musconetcong River and County Route 604 ☐ not for publication

city or town Byram Township (Sussex County), Mt. Olive Township (Morris County) ☐ vicinity

state New Jersey code NJ county Sussex code 035 zip code 07874

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this X nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property X meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

___ **national** ___ **statewide** X **local**

Richard Boornazian — Ass't Commissioner 3/5/15
Signature of certifying official/Title Date

NJ DEP
State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

✓ entered in the National Register
___ determined eligible for the National Register
___ determined not eligible for the National Register
___ removed from the National Register
___ other (explain:) _____

for Edson N. Beall 4.28.15
Signature of the Keeper Date of Action

Waterloo Village (Boundary Increase #1) — Name of Property

Sussex and Morris Counties, New Jersey — County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

- [x] private
- [ ] public - Local
- [X] public - State
- [ ] public - Federal

Category of Property
(Check only one box.)

- [ ] building(s)
- [X] district
- [ ] site
- [ ] structure
- [ ] object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
19	10	buildings
5	0	sites
0	0	structures
0	0	objects
24	10	**Total**

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing)

N/A

Number of contributing resources previously listed in the National Register

18 Buildings (Waterloo and Rutan Cabin)
1 Site (Morris Canal)

6. Function or Use

Historic Functions
(Enter categories from instructions.)

DOMESTIC/ single Dwelling
DOMESTIC/multiple Dwelling
DOMESTIC/hotel
AGRICULTURE/ agricultural outbuilding
COMMERCE/TRADE/Specialty Store
RELIGION/religious facility
FUNERARY/cemetery
INDUSTRY/manufacturing facility
TRANSPORTATION/rail-related
TRANSPORTATION/water-related

Current Functions
(Enter categories from instructions.)

VACANT/NOT IN USE
OTHER/ storage, maintenance building
GOVERNMENT/museum-related
LANDSCAPE/park
TRANSPORTATION/pedestrian-related
RELIGION/religious facility
FUNERARY/cemetery

7. Description

Architectural Classification
(Enter categories from instructions.)

COLONIAL/Georgian
LATE VICTORIAN/Italianate
LATE VICTORIAN/Second Empire
LATE VICTORIAN/Queen Anne

Materials
(Enter categories from instructions.)

foundation: STONE, BRICK
walls: STONE/Sandstone, STUCCO, WOOD
roof: SLATE, WOOD, ASPHALT

Waterloo Village (Boundary Increase #1)	Sussex and Morris Counties, New Jersey
Name of Property	County and State

OTHER		
COLONIAL/Vernacular	other:	
MID-19th CENTURY/Vernacular		

Narrative Description

See Continuation Sheet.

Waterloo Village (Boundary Increase #1)
Name of Property

Sussex and Morris Counties, New Jersey
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [X] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [X] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [X] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

Commerce
Industry
Architecture
Transportation
Archaeology

Period of Significance
c.1760-1924

Significant Dates
c.1760, c. 1790, 1828, 1831, 1845-1860, 1854, c. 1890, 1917, 1923

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation
N/A

Architect/Builder
Unknown

Period of Significance (justification)
The period of significance for Waterloo Village is c.1760, the development of Andover Forge at Waterloo, to c. 1924, the abandonment and dismantling of the Morris Canal, which was closely connected to the development and prosperity of Waterloo Village.

Waterloo Village (Boundary Increase #1) | Sussex and Morris Counties, New Jersey

Name of Property | County and State

Criteria Considerations (explanation, if necessary)
N/A

Statement of Significance

See Continuation Sheet.

9. Major Bibliographical References

See Continuation Sheet.

Previous documentation on file (NPS):

___ preliminary determination of individual listing (36 CFR 67 has been requested)
_X_ previously listed in the National Register
___ previously determined eligible by the National Register
___ designated a National Historic Landmark
___ recorded by Historic American Buildings Survey #_____
X recorded by Historic American Engineering Record # NJ29-J
___ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

___ State Historic Preservation Office
_X_ Other State agency
___ Federal agency
___ Local government
___ University
___ Other
Name of repository: _____

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property 227 acres

Latitude/Longitude Coordinates

A. 40.915878, -74.764907
B. 40.916958, -74.763278
C. 40.916243, -74.759796
D. 40.918496, -74.751189
E. 40.920336, -74.747514
F. 40.920886, -74,740099
G. 40.917018, -74.743582
H. 40.914957, -74.748391
I. 40.912529, -74750219
J. 40.912146, -74.756068
K. 40.913519, -74.760098

Map Datum: WGS84

Verbal Boundary Description

See Continuation Sheet.

Boundary Justification

See Continuation Sheet.

11. Form Prepared By

Waterloo Village (Boundary Increase #1) | Sussex and Morris Counties, New Jersey
Name of Property | County and State

name/title Margaret M. Hickey, R.A., Historic Preservation Specialist
Richard Hunter, Ph.D., RPA, Principal Archaeologist, James Lee, III, M.A., RPA, Principal Investigator, and J. Patrick Harshbarger, Principal Historian/Architectural Historian, M.A., M.P.A.
organization Connolly & Hickey Historical Architects, LLC and Hunter Research, Inc. date August 9, 2014
street & number c/o P. O. Box 1726 telephone 973-746-4911
city or town Cranford state New Jersey zip code 07016
e-mail mhickey@chhistoricalarchitects.com

Waterloo Village (Boundary Increase #1) | Sussex and Morris Counties, New Jersey
Name of Property | County and State

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** (7.5 or 15 minute series) indicating the property's location.

  A **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Continuation Sheets**

- **Additional items:** (Check with the SHPO or FPO for any additional items.)

Photographs:

See Continuation Sheet.

Property Owner:

(Complete this item at the request of the SHPO or FPO.)

name State of New Jersey, Dept. of Environmental Protection, Division of Natural and Historic Resources
street & number P.O. Box 420 telephone 973-984-3819
city or town Trenton state New Jersey zip code 08625

name Waterloo United Methodist Church
street & number P.O. Box 416 telephone 973-347-7900
city or town Stanhope state New Jersey zip code 07874

Summary Paragraph

Waterloo Village (Historic Image 0001)[1] is a 19th-century village with 18th-century origins located in Allamuchy Mountain State Park in Sussex and Morris Counties. The property serves as an open-air museum interpreting the village's history and development. The portion in Sussex County is within Byram Township and the portion in Morris County is within Mount Olive Township. The Village is accessible via Waterloo Road (Sussex County Road 604), which runs approximately east-west along its north side. Waterloo Valley Road, which runs approximately parallel to Waterloo Road, serves as the main road through the village. Interstate Route 80 is located immediately south of the village. The village straddles the Musconetcong River, which played an important role in the history and development of the area. The Morris Canal crossed the river at Waterloo and a portion of the canal runs alongside the river through the village and was responsible for much of its 19th-century development; Inclined Plane 4 West (Morris County) (Historic Image 0003) and Lock 3 West (Sussex County) (Historic Image 0002) remain within the village today. The village on both sides of the river features a mix of residential, commercial, industrial, and transportation-related buildings and sites dating from the 18th, 19th, and 20th centuries, as well as some modern support facilities.

Waterloo Village Boundary Increase #1 uses the nomination prepared in 1976 but expands upon it in several ways beyond increasing the overall boundary. Primarily, significant architectural and historical research has been undertaken of the village that shall be made part of the record with regard to both descriptions of the site and the historical overview. In addition, there has been new construction and at least one building lost to fire since the preparation of the nomination in 1976.

Waterloo Village

The Sussex County side of the village is a cultivated landscape where the Morris County side sits primarily in its natural setting with the exception of the plane, which has been cleared of overgrowth from time-to-time by volunteers. The boundaries for Sussex County are distinct as defined by roads, paths and other features, and contain the bulk of the residential, commercial and industrial-related buildings and sites including the Waterloo United Methodist Church. The key residential buildings remaining include several constructed in the 18th-century when Waterloo Village was Andover Forge and modified by the Smith Family for their use, as well as several workers' houses, a hotel, and architect-designed residences constructed in the late-19th century. The General Store and Blacksmith Shop are sited in close proximity to the Morris Canal showing their relationship to the commercial importance of this transportation corridor. The Gristmill (formerly a coal house) and portions of the foundations of the sawmill may have 18th-century origins and are sited along the Musconetcong River showing their reliance upon this water source. To the north of the core of the village along Waterloo Valley Road are a number of barns and carriage houses related to farming on the site through much of its history and domestic activities. The Sussex County side also contains the bulk of the modern support facilities including the Meeting House, the Comfort Station and the Museum Shop and Café.

The Morris County portion of Waterloo Village includes industrial, commercial, and transportation-related buildings, sites and structures from the 19th and 20th centuries. The alignment of the Sussex Railroad (originally the Sussex Mine Railroad) is still present and includes its embankments, sites of sidings, iron ore transfer docks, and stone abutments from bridge crossings. These features date from the mid-19th century. A mid-19th-century frame house remains that is identical to houses found on the Sussex County side of the village; this house likely served as housing for local residents. Another major feature is the site of the Waterloo Ice Company's icehouses that were active from c.1890-1920. The foundations of the icehouses remain, as well as a terracotta building that likely served as a manager's

[1] This nomination includes both Images (current) and Historic Images, which are numbered separately.

residence or workers' housing. A graded right-of-way where rail siding originally led up to the site of the icehouses also remains. Also present are remains of stone fencerows of former agricultural fields that once existed at Waterloo and the stone abutments for a road bridge that spanned the river and connected the Morris County and Sussex County sides.

The history and development of Waterloo Village from the 18th century through to the mid-20th century reflect a layering of both archeological and architectural resources found within the boundaries of the Waterloo Village (Boundary Increase #1) Historic District. The original nomination dealt primarily with the architectural resources; this nomination increases both the physical boundaries of the Historic District and the period of historical development within the village, and therefore incorporates the potential buried archeological resources and the visible above-ground resources on both the Sussex and Morris County sides of the Musconetcong River. The nomination also includes the portions of the Musconetcong River that runs through the village given both its importance to the history and development of the village but also the potential for buried archeological resources.

ARCHITECTURAL RESOURCES

In the 1976 nomination, twenty buildings were noted as part of Waterloo Village. A designation of contributing versus non-contributing was not made at that time. The following descriptions reference these original figures, and note the resources' classification. A new numbering system has also been provided denoting "S" for the Sussex County side of Waterloo Village, where the majority of the architectural resources are located and "M" for the Morris County side where a few architectural resources are found. The description of the resources along the Sussex County side reflects a west to east progression along Waterloo Valley Road including those buildings and structures along the river before circling north along the secondary road back to the west. The designation for each resource is either an individual building, such the General Store (S-9) or a grouping of resources, such as the features of the Morris Canal (S-1/M-1).

Waterloo Valley Road winds a distance from Waterloo Road before entering the village. As one approaches the village, a portion of the Morris Canal (S-1) appears to the south and a driveway to the north leads to a small asphalt parking lot and the first grouping of buildings in the village: Waterloo United Methodist Church (S-2); its Parsonage (the Nathan Smith House/S-3), and a cemetery (S-4). Beyond the Church property to the northeast is a complex of buildings that were constructed in the 1970s and 1980s to support interpretation of the site as a living history museum. These include the Meeting House (S-5), the Comfort Station (S-6), and the Museum Shop and Café (S-7). To the west of the Church property continues the properties associated with the history and development of Waterloo Village in the 18th and 19th centuries beginning with one of two identical worker's houses constructed in the 1840s; Worker House 1 (S-8) is located across from the canal prism on the north side of the road. To the east of the house is a narrow roadway that leads north connecting Waterloo Road with the museum support buildings. Crossing to the south of Waterloo Road is the General Store (S-9) and to the south beyond the store is the start of the canal prism where it transitions from Lock 3 West (S-1) which is located to the General Store's southeast separated by a tailrace. To the north of the lock is the Blacksmith Shop (S-11). At the lock is the location of the footbridge (no longer extant) that connected the Sussex and Morris County sides at Inclined Plane 4 West (M-1). There is currently a reconstructed bridge (S-12) in its location that no longer functions due to its poor condition. Heading back toward Waterloo Village Road, to the northwest of the General Store is the Seymour R. Smith House (S-13). Continuing on the north side of the road is the Smith Homestead (S-14) set back from the road. A stone wall retains the built-up grade raising both houses above the road a couple of feet To the east of the Smith Homestead is an area of open land where historic images show buildings were located during the height of activity at Waterloo (S-15) and may have also been the location of support facilities during the Andover Forge period. To the northeast of

this area is the Waterloo Hotel (S-16), which is located at the intersection of Waterloo Valley Road and Hermitage Road, which runs from the river north. Hermitage Road formerly led to a vehicular bridge that connected the two sides of the village and where only bridge abutments remain today. East of the Hermitage Road are the ruins of a former Sawmill upon which a modern sawmill has been constructed (S-17) and to the north of this is the Gristmill (S-18), which served as the coal house in the 18th century. Heading back along the north side of Waterloo Village Road to the east are in succession Worker House 2 (S-19), the Peter D. Smith House (S-20), and Samuel T. Smith House (S-21). To the east of the Samuel Smith House is another secondary road leading north accessing a number of the outbuildings and carriage houses associated with the primary residences along Waterloo Valley Road.

Before proceeding north, Waterloo Valley Road continues in a northeast direction before once again joining Waterloo Road at the eastern end of the village. Two buildings set close to the Samuel T. Smith House on the north side of the road are the Canal Museum (Teacher's Residence/S-22), and the Administration Building (S-23). East of the Administration Building, Waterloo Valley Road connects with an unnamed secondary road that runs parallel with it until it terminates at Hermitage Road. On the north side of the second road at its east end is the Waterloo Estate Cottage (S-24). Continuing west are the Samuel Smith Carriage House (S-25), the Cottage (S-26) and the Peter D. Smith Carriage House (S-27). To the west of Hermitage Road is the Modern Carriage Building (S-28). Heading north along Hermitage Road beyond the secondary road is the Rutan Cabin (S-29), which was moved to this site to save it from demolition. To the west of the Modern Carriage Building and the north of the residences along Waterloo Village Road are the Gazebo (S-31), the Homestead Barn (S-32) and the Seymour R. Smith Carriage House (S-33); all of these buildings are located to the east of the modern museum-era buildings.

S-2 Waterloo United Methodist Church – Contributing (NR Building No. 1)

The Church (Image No. 0001), constructed in 1859, is a one-and-one-half-story wood frame building rectangular in plan, three bays wide by three bays deep with a center bell tower and steeple. The building faces south overlooking the Morris Canal and the Musconetcong River. The church has a rubble stone foundation, is raised several feet above the road, and is surrounded by a poured concrete retaining wall on three sides with a simple metal railings set on top of the wall. Concrete steps are centered in the wall and align with the central front entrance to the church. The retaining wall and railing appear to be early-to-mid-20th-century features. There are additional stone steps with landing at the church leading to the front door. The roof is a gable clad with asphalt shingles with its ridge running north/south. The roof is finished with a deep molded cornice that returns on the front façade. The building is clad with wood clapboards. In each of the bays flanking the center door are half-round arched double-height window openings with 20-over-16-light wood-hung sashes. Tall wooden shutters with half-round heads are set to either side of the opening. The center door is a pair of doors with Gothic-topped panels in a square-shouldered opening. Above the door is a projecting molded hood. Set at the gable end is a single half-round arched window opening with 6-over-6-light wood-hung sashes and it too has wooden shutters. The bell tower is square in plan and is made up of two levels. The first level is a simple wood base clad with vertical beaded board siding. Above this level and separated by a simple cornice with small dentil moldings is the bell level. At each elevation of the bell level is half-round arched louvered opening with Doric pilasters set at each corner. A projecting cornice separates the bell level from the steeple above. The steeple is also composed of two levels: an octagonal base composed of false openings separated by simple pilasters; and the octagonal steeple, which is clad with wood shingles and has a copper finial. Each bay on the east and west elevations has the same windows at the front including the wood shutters. The rear (north) elevation is unadorned.

S-3 Parsonage (Nathan Smith House) – Contributing (NR Building No. 2)

The Parsonage, constructed in the mid-18th century, is a two-story residence that was constructed as and remains today as a two-family residence. The building currently serves at the parsonage for the Waterloo United Methodist Church. The house faces south and is set on a stone foundation several feet above the road having a similar view as the Church of the canal and the river. The building is wood frame and four bays by two bays deep with a two-bay deep, two-story rear addition in line with the east residence. The building has been renovated within the last twenty years, but its original form and fenestration pattern have been retained. The building has a gable roof clad with asphalt shingles and with its ridge running east/west. The roof overhangs slightly on each side. The facades are finished with wood clapboard siding and detailed with corner boards. A shallow front porch encompassing the two center bays protect the two entry doors to the residence. The porch has a shed roof that is supported by turned wooden posts. Wooden steps that span the width of the porch lead to the first floor. At the west outer bay of the first floor is a 6-over-6 wood-hung sash and at the east outer bay is a projecting square bay window with a 20-light fixed sash. At the second floor there are 6-over-6 wood-hung sashes in each bay. At the east and west sides are 6-over-6 wood-hung sash in each bay. All of the windows are finished with wide plain wood trim with projecting sill and slight hood molding. At each gable end are 2-over-2 wood-hung sashes. The addition has a flat roof and carries many of the same features of the main house including clapboard siding, wood-hung sash and a projecting plain wood overhang at the roofline. A wood porch with shed roof projects from the rear elevation with wooden steps leading to the porch level, which is supported by a stone wall.

S-4 Waterloo Methodist Church Cemetery – Contributing

Located immediately to the north and east of the Church building is a small cemetery composed of 19th and 20th-century grave markers of varying types. The earliest grave markers date from the late 1850s, about the same time as the Church building was constructed. The cemetery is a rectangular plot of land surrounded by a wooden and metal fence on its west and north sides. The concrete retaining wall with metal railing at the Church is carried along the east side of the cemetery so it is set a few feet above the Nathan Smith property. On the perimeter of the plot are mature trees of various species. The cemetery is composed primarily of marble and granite headstones with only a few brownstone markers; the markers overall are in fair to good condition and the site overall is maintained.

S-5 Meeting House – Non-contributing

The Meeting House (Image No. 0002) was constructed in the early 1980s to serve as an assembly building with commercial kitchen facilities. The building is one story in height and is composed of three sections, a center block three bays wide by one bay deep flanked by two smaller two-bay wings to its east and west. The main building and wings have gable roofs with their ridges running east/west. At each end of the main block are two large brick chimneys and at the center of the main roof is a wood-frame cupola with weathervane. The roofs are clad with wood shingles. The walls are clad with vertical board siding and the small section of foundation that is exposed is clad with stucco. The main space on the interior is a two-story height space. The fenestration is typically large multiple-lite windows or windows and doors with some exceptions at utility spaces, such as restrooms and the kitchen, which are located in the east wing. The utility windows tend to be plainer and smaller and set high in the wall. Surrounding the entire building is a brick patio.

S-6 Comfort Station – Non-contributing

The Comfort Station was constructed in the 1980s to house public restroom facilities and other support space.

The building is one story and smaller than the Meeting House, but is of similar design and construction. The building is composed of three sections, a larger center section flanked by smaller wings. The center main section is three bays wide and has a gable roof with its ridge running east/west. At each gable end are large brick chimneys. The east wing is set perpendicular to the main with a similar gable roof and is two bays wide. The three-bay wide west wing is set parallel to the main section with a one-bay wide connector building set between each section. The wing has a gable roof with its ridge running north/south. The connector also has a gable roof with its ridge running east/west. All of the roofs are clad with wood shingles and the exterior walls are clad with vertical board siding. The windows are typically wood-hung with multiple lites. The windows at the center section have multiple-lite eyelet windows set above. The doors are typically wood board and batten, and each window opening is fitted with shutters.

S-7 Museum Shop and Café – Non-contributing

The Museum Shop and Café building was constructed in the 1980s to serve as support space for museum activities. The building is nine bays wide by three bays deep with an expansive shallow gable roof with its ridge running east/west. The roof is clad with asphalt shingle. There is a shallow cupola with similar roof line set at the center and a large stone chimney clad with stucco at the east gable end. The exterior walls are finished with vertical board siding. In each the south and north exterior walls are seven large openings. The center opening has a pair of double doors set in a square-shouldered opening. Flanking this door are floor-to-ceiling segmental arched large window openings with multiple lites. Centered on the west gable end is a large floor-to-ceiling segmental arched opening divided into six components consisting of three large wooden windows with three transoms above. This entire opening has wooden shutters. The fireplace back and chimney are exposed on the east side and flanked by two pairs of vertical board and batten wood doors.

S-8 Worker House 1 – Contributing (NR Building No. 3)

The two-story Worker House 1 (Image No. 0003), constructed c. 1840, is two bays wide by two bays deep, and has a full basement. The building is essentially a two-family dwelling with one dwelling to the east and the other to the west. It is constructed of stone masonry finished with stucco and is set into a hillside. It has a shallow shed roof that pitches to the north and stone parapets rise slightly above the roof level on the east and west sides; two brick chimneys are centered on these parapets. Two stone retaining walls are set to either side of the south elevation; these walls open at the front of the building and fully expose the ground floor level at this elevation. Small entry stoops provide access to the east and west side doors at the first floor level. A patio is set over a stone, below-grade storage enclosure at the north elevation on the east side. At the west side, there is a similar storage area, which has a shed roof.

The current roof is membrane roofing with aluminum flashing installed in 2008. There are no gutters or leaders; water simply falls off the north edge of the building. The north and south roof lines are finished with a double fascia: a small unfinished board with a taller primed board below it; this detail was installed in the last decade. A third chimney, constructed in the mid-20th century of concrete masonry unit and finished with stucco, is located on the north elevation.

The flat-topped masonry openings at the door and window openings have wood lintels at their heads. The windows have projecting wood sills. The frames are recessed slightly in the masonry openings. The doors are set flush with the interior wall, which provides a deep recess. There are modern shutter pintles at the doors and window frames.

There are two masonry openings in each bay on the north and south elevations, and one in each bay on the east and west elevations at each floor level. At the ground floor on the south elevation, one door provides entry to each dwelling unit with a window at the center. At the two upper levels of the north and south elevations, there are four windows across. At the first floor of the east and west elevations there is one door and one window and at the second floor two windows. Typically, the windows are 6-over-6 wood-hung sash at the ground and first floor levels, and at the east and west elevations of the second floor. At the north and south elevations at the second floor, the windows are three-lite wood awnings. The south elevation window openings are fitted with shutters; these are 20th-century fabric. The doors are typically wood with differing panel to light configuration as the doors have been modified in the 20th century.

S-9 General Store - Contributing (NR Building No. 9)

The General Store (Historic Image No. 0004 and Image No. 0004), constructed c. 1831, is a two-story rubble stone masonry structure with quoins finished with stucco. It is three bays wide (east/west) by four bays deep (north/south). The building is located on the south side of Waterloo Valley Road sandwiched between the road and the canal. A narrow drive extends along its east side from Waterloo Valley Road to what is now a small wood aqueduct. At the time of canal activity, the drive was a footpath and the current aqueduct represents part of the former lock. The site is steeply sloped to the south creating a banked ground plan; the basement level is fully exposed on the store's south side and below grade on its north side. On the west side, the slope is gradual until the south end where it drops dramatically to the canal. On the east side, the slope is steepest at the north end, leaving most of the ground floor at least partially exposed on this side. Two low retaining walls, extending east from the east wall, provide a path to a ground floor door opening that would otherwise be slightly below grade. The ground floor on the south elevation is partially submerged in the canal.

The building has a single shallow pitched gable roof with its ridge running north/south. There is a "working" attic floor level within the gable. The building has two main sides. The pedestrian entrance is on the north side while the commercial entrance (for unloading and loading the boats) is on the south side overlooking the canal; the north side is the main entrance today and there is a secondary entrance to the basement level on the east side.

The roof is wood shingle. There is an internal brick chimney near the ridge along the east slope and abutting the north wall. Other than the chimney, the roof span is unbroken. The fascia and rake boards are flat wood. A secondary board is attached to each fascia at an angle forming a "V" gutter. It is open at each end, pitches towards the canal (south), and allows water to spill directly into the canal. Although there is no overhang, the peak of the gable extends beyond the north and south elevations forming a "hay hood." It is finished on its front with a wood pediment and rake boards. This structure protects the hoisting equipment that is exposed from the underside.

At the north elevation, there is a door in the center bay flanked by windows in the two outer bays on each level. The second floor windows are inset from the first floor windows. On the east side, there are three openings at the ground floor level: two windows in the first and third southern-most bays and a door in the bay between; the fourth bay is below grade. At the first floor level, there is an alternating door and window in each bay; beginning with a door in the northern-most bay and ending with a window in the southern-most bay. At the south elevation, there is a door in the center bay flanked by windows in the two outer bays on each level; the attic level windows are inset from the two below. The two lower level doors are covered by fixed 20-lite wood sash, late-20th-century modifications. On the west elevation, there is a former door in the southern-center bay and a window in the northern-center bay. The windows are typically 6-over-6 wood-hung sashes set in flat wood frames. The doors typically constructed of vertical boards are flush with the interior wall and are therefore set in

deep wood surrounds. The first floor north and west windows have solid shutters.

S-11 Blacksmith Shop – Contributing (NR Building No. 10)

The one-story Blacksmith Shop (Image No. 0005) is a single space, three bays wide by one bay deep. The date of the building is unknown but would have been constructed around the time of the Morris Canal, c. 1830. It has a wood shingle gable roof with the ridge running north / south. There is a brick chimney in the west side of the south gable end. There is no formal water conduction system. The roof ends are trimmed with flat wood fascias and rake boards against the masonry. The walls are rubble stone masonry and remnants of stucco can be seen on the masonry. The building was constructed on a slight hill and the south façade is built into the hillside; the floor level is about three feet below the grade on this side.

There is one set of doors: a pair of oversized swing doors centered in the east elevation. These are late-20th century material of bare wood with two panels and cross-buck wood members within the panels. The windows are 6-over-6 wood-hung sash in a wood frame within a plain masonry opening with a wood lintel. There is one window on each the north and west elevations and two windows in the east elevation on either side the doors.

S-13 Seymour R. Smith House – Contributing (NR Building No. 4)

The Seymour R. Smith House (Image No. 0006), constructed in 1878, is located on a corner lot at the intersection of Waterloo Valley Road and a secondary road to the west of the house that leads to the north. The front of the house faces south and is set back from Waterloo Valley Road on a significant rise. The house has a sweeping view of the canal, the river and its surrounding buildings. A stone retaining wall lines the road. A set of stone steps and a stone path leads from the road to the front porch. The first floor is entered via a porch, which stands about four feet above grade.

A footpath runs along the east side of the house leading to the side entrances and continues into the back of the property before ending abruptly at a small foundation, which may be from a relocated outhouse. An outhouse set further back from this foundation has millwork similar to the main building. A wire fence runs adjacent to the path and separates this property from the Homestead, which is located to the east. There is a single opening in the fence.

The Seymour R. Smith House is three bays wide by four bays deep, and is a fine example of a wood frame Italianate style residence that remains true to its original form and detailing. It is generally two stories with a three-story tower and a one-and-a-half-story north wing.

The interior layout dictates the exterior form and consists of four primary spaces on the first floor that extend in each direction and form a modified cruciform. Each of the four projections has a gable roof with a ridge that runs full length. The projections at the main building are generally equal to each other. The east and west projections have one continuous ridgeline, and intersect with the south ridgeline, forming a cross gable. The fascias and soffits of these three sections are all interconnected; interrupted only by the tower in the southeast corner. The roofline of the rear wing is significantly lower than the other sections. Its ridge rises to the top of the fascia of the other roofs, and the roof partially obscures the roof detailing of the main building.

The square, three-story tower occupies the southeast corner of the main building, rises well above its adjacencies, and is topped by a steep, hipped roof that is more than a full story in height. A one-story entrance porch wraps around the tower and the southeast corner of the main building. A one-story side porch occupies the northeast corner and an enclosed space of exactly the same dimensions as this side porch is located on the west side of the

rear wing; this northwest porch used to be a service porch. A one-story conservatory is located in the southwest corner. Each of the one-story elements has a shallow hip roof. The south and east gable ends are detailed with two-story, five-sided bay window projections. The bays are deeper at the first floor, creating two levels of roof.

S-14 Smith Homestead - Contributing (NR Building No. 8)

The Homestead, (Image No. 0007) (see also Archeological Resources) is one of the oldest structures with its core being constructed in the mid-18th century in two phases. The building is set in the middle of the village along Waterloo Valley Road. It is located in the crook of a sharp turn in the road as the road rises uphill. The front elevation faces southwest (south) at an almost 45 degree angle directionally. The property itself is set above the road several feet and a stone retaining wall lines the road. A set of stone steps and a stone path lead from the road across the south lawn to the front entry porch. The house is across Waterloo Valley Road from the General Store, but due to the hillside, the porch floor is about thirteen feet higher than the front entry of the Store. The Homestead has sweeping views of the canal, the river and most of the industrial buildings.

The site is shared with the Homestead Barn (S-32), the oldest of the remaining carriage houses and is adjacent to the Seymour R. Smith House (S-13) to its west and the Waterloo Hotel (S-16) to its northeast. The Waterloo Hotel is more than twice the distance from the Homestead than the Seymour R. Smith House and is not readily visible from the building.

The Homestead is a two-story rectangular masonry building with a long gable roof clad with wood shingles. It is five bays wide (east/west) and two bays deep (north/south). The exterior is finished with stucco and wood detailing. The historic core of the building was constructed in two phases, but it appears today as one cohesive whole. There are two, one-story additions on the back (north) elevation that share one low-sloped hip / shed roof. The east one-story addition is wood frame with wood siding and the west is wood frame with stucco. They are each one bay deep (north/south) although, the west end is slightly deeper than the east. The two additions are about equal in length (east/west) and together span from the east end of the masonry structure to slightly beyond the west end.

The masonry structure was renovated in the late-19th century. Two, two-story bay window projections were added on the front (south) elevation: one at the southeast corner and one at the west end of the elevation. A one-story porch was constructed between them. These additions all have Victorian detailing and the bay windows match those at the Seymour R. Smith House exactly. It is likely that the wood frame additions were also added at or near this time.

S-16 Waterloo Hotel - Contributing (NR Building No. 13)

The Waterloo Hotel (Image No. 0008) (see also Archeological Resources) was constructed originally in the mid-18th century as a residence, modified in the mid -19th century to serve as a hotel, and modified again in the mid-20th century to serve as a nursing home. The front of the Waterloo Hotel faces south toward the road and sits on a rise above the road overlooking the industrial buildings below and the river beyond. The bridge that connected the opposite side of the river with the village in the 19th century (removed in the 1960s) was essentially in line with the front of the building. This intersection appears quite large in historic photographs. The road, Heritage Road, continues along the building's west side towards the rear of the village indicating this area was a hub of village activity.

The front (south) of the Waterloo Hotel is a long rectangular masonry structure finished with stucco that was

constructed in two parts in the mid-18th century. To the rear (north) is a two-story wood frame addition, also constructed in two parts, that stretches along the north elevation. The frame additions are clad with wood clapboard siding. The two different builds of the masonry and frame parts are divided into east and west sections.

The west section of the masonry structure is three bays wide by two bays deep and two stories high. It has a gable roof with its ridge running east/west; the roof is clad with wood shingles. The east masonry section is set back approximately six feet from the west section's front façade. This section is two bays wide by two bays deep and two stories high. It has a flat roof that pitches slightly to the north. Its east masonry wall continues the whole length of the east end of the building enclosing the east frame section as well. Both the east and west frame sections are two stories high, one bay deep and have low sloped, essentially flat, roofs. The edge of the east addition's roof is slightly higher than the west. Like the masonry structures, the west section is three bays wide while the east section is two bays wide.

S-17 Modern Sawmill – Non-Contributing (NR Building No. 12)

The Modern Sawmill (see also Archeological Resources), constructed in 1981, is set immediately to the southeast of the Gristmill and both buildings are located on the south side of Waterloo Valley Road; the front of the Gristmill faces north. The Modern Sawmill overlooks the Musconetcong River to its south. The two buildings are connected by a walkway at their first floor level. The Modern Sawmill straddles a raceway that joins the basin to the east and the tailrace to the west. During the canal era (and into the mid-20th century), the road that connected the bridge across the canal basin and met Waterloo Valley Road crossed immediately in front of this site. This building is modern but on the site of an earlier plaster mill and sawmill, and also in the location of the forge operated in the eighteenth century. The original National Register nomination noted that the foundation was a contributing resource; however, based on documentary evidence the foundation alone is not significant, but in the context of the greater industrial archeological resources contributes to the potential to tell the story of the Andover Forge era at Waterloo.

The one-story Modern Sawmill is a wood frame building on a masonry foundation, most of which was built in the 1980s, including an exposed basement on all but the south side. It is four bays wide in each direction; the bays to the east/west are wider than the north/south bays.

The roof over the north half of the building is a gable with its ridge running east/west. The south section has a gable roof covering the west half and a long shed roof covering the east. All three roofs are clad with wood shingles. The first floor level is clad with unfinished vertical boards. Most of the foundation appears to be rubble stone, but is more likely concrete masonry units clad with a stone veneer. At the foundation level, there is one window opening on the north elevation covered with vertical board shutters. The east elevation has two large openings: one centered below the north section and one at the south end of the south section. These are the access for the flumes. The north opening has wood gates, and on the west elevation, there are also two openings, one has a double door with vertical wood siding panels and the second a vertical-board man door.

At the first floor, the north, east and west elevations each have three windows and one door opening. The openings on the north elevation are evenly spaced and the western-most opening is a door, which connects to the Gristmill. On the east and west elevations, the windows are spaced evenly within the north and south sections. The doors are located in the north-center opening on the east and the south-center opening on the west. The windows and the openings with doors have flat wood a surround with a projecting sill. The windows are 6-over-6

wood-hung sash. The single doors are vertical wood planks and the double door, on the west elevation, is book matched diagonal wood planks.

On the south elevation, there are two large openings evenly spaced across on the west side below the gable roof and one even larger opening at the west end of the east side below the shed roof. Each west opening has a wide shallow wood ramp leading to them. The east opening has a tall step up from grade. A double door is centered high in the gable end.

S-18 Gristmill (former Coal House) - Contributing (NR Building No. 11)

The Gristmill (Historic Image No. 0006 and Image No. 0009) (see also Archeological Resources), is located at the southeast corner of the crossroad of Waterloo Valley Road and Heritage Road. The original date of construction appears to be the mid-18th century to serve as the coal house for the forge that was located to its south. The building was converted for use as a Gristmill in the early-19th century after forge activities on site ceased, and it was renovated again in the early 1860s for its use as a grist mill. The building's front façade faces north and the Modern Sawmill is located to its south. The site is steeply sloped to the south creating a bank barn form. The lower level is fully exposed on its east, west and south sides while only the upper floors are exposed on the north elevation. On the east side, the grade drops naturally while a retaining wall holds back grade at the building's northwest corner. A set of landscape-tie steps lead from the road to the lower level and the Modern Sawmill. The Modern Sawmill is located within feet of the south side of the Gristmill, and the two buildings are connected by a first-floor-level bridge.

The Gristmill straddles a raceway that joins the headrace and basin to the east and the tailrace to the west. After leaving the building, the tailrace continues under the roadway before joining the tailrace of the Modern Sawmill.

The Gristmill is three bays wide by six bays deep; the bays are wide. The building is rubble-stone masonry with distinct quoins at each corner. It is one-and-a-half stories in height with a partially-exposed ground floor on its west, east and south sides. The roof, which is clad with wood shingles, is a gable with its ridge running north/south. Brick details the stone masonry of the archway for the east headrace opening and of two in-filled window openings at the attic level of the south elevation.

There is an internal chimney located close to the ridge along the west slope that aligns with the south elevation. Another smaller chimney aligns with the east elevation at the base of the east slope within several feet of the south wall. Other than the chimneys, the roof span is unbroken.

Each bay of all four elevations has a masonry opening on the first-floor level. On the north elevation, each bay of the attic level has an opening. The center bay openings at both the first floor and attic of the north elevation have doors. The second bay from the north on the west elevation also has a door at the first and ground floor levels. On the east elevation, the ground floor has two openings: the previously mentioned archway and a window to its north. On the south elevation, there are windows in the two outer bays of the attic level, a door at the first floor leading to the Modern Sawmill bridge and a door centered at the ground floor.

The windows and doors are set in flat wood frames. The doors are flush with the interior wall and set in deep wood surrounds. They are typically constructed of vertical boards. The windows are typically 6-over-6 wood-hung sash.

S-19 Worker House 2 - Contributing (NR Building No. 14)

Worker House 2 was constructed c. 1840 and added to in the mid-20th century. The building faces south and is set back from the road, and the ground floor level, which is almost level with the road, opens to a small courtyard with circular drive to the south. The grade then rises to the north and is retained on both sides of the courtyard by stone retaining walls. The grade rises to such a level that the ground floor level, which is fully exposed on the south side, is barely exposed on the north side. The house is surrounded by lawn on its north, west and east sides. A small stoop provides access to the west side door at the first floor level. The stoop and stairs are constructed of concrete with shale treads.

Worker House 2 is comprised of the original c. 1840 section in the center and two, 20th-century additions on either side (east and west). The original center section and the west addition are both two bays wide and two bays deep and one-and-a-half stories in height with an exposed ground floor level on the south elevation. The east addition is one bay wide by one bay deep and one story high. The additions are set back from the center section. The east and west addition are constructed of concrete masonry units finished with stucco. The center section is rubble-stone masonry, which is also finished with stucco. The stucco has been removed at the ground floor level of the center section.

Each section has a gable roof finished with asphalt shingles and with a ridge running east/west. The center section has a regular slope. The west addition's south slope matches the pitch of the central section but, because of the setbacks, it is slightly lower than the center section's roof, and the north slope has a shallow pitch. The east addition's roof is shallow, matching the pitch of the north slope on the west addition. There is a pent roof above the ground floor of the west addition. Two dormers, located on the north slope of the center section, are sided with wood shingles. There are three chimneys on the center section: two chimneys finished with stucco centered on the ridge at each gable-end wall, and a large rubble-stone chimney centered on the north elevation between the dormers. The north chimney is wide and has two terra-cotta flues.

All of the wood sashes date to the 20th century. The windows are typically wood-hung sash with applied muntins. There are four evenly spaced openings on each level in the center section of the south elevation; the two outside ground floor level openings are doors, the remaining first and ground floor level openings are windows, and the second floor openings are eyebrow windows. The doors are random-width beaded board with four-lite glass panels set at eye level. On the west addition at the south elevation, there is a wide garage door opening on the ground floor level, a wide window opening on the first floor; and two evenly spaced eyebrow windows on the second floor. On the east addition, there is one wide window opening on the first floor and one small awning window opening centered at the ground floor level. Every window opening on the south side has a set of shutters.

S-20 Peter D. Smith House - Contributing (NR Building No. 15)

The Peter D. Smith House (Historic Image No. 0007 and Image No. 0010), constructed in 1871, is situated at the top of a hill along Waterloo Valley Road overlooking the heart of the village to its west. The front entrance faces south toward the road. The lot itself is several feet above the road and is lined by a stone retaining wall. A set of stone steps and a stone path lead from the road to the front porch. Typical of residential structures of this period, the first floor is entered via a porch, which stands about two feet above grade.

A narrow drive runs along the house on its east side. There are two outbuildings: a stone building, which may be a spring house (the interior is inaccessible), and an outhouse. The detailing of the outhouse is similar to the main house and appears to be contemporary to the Peter D. Smith House.

The house is a fine example of a Second Empire residential structure in massing and detailing. The main body of the house is five bays wide by four bays deep and three stories tall. It is wood frame with wood siding and trim topped with a mansard roof (the third story). A cupola is centered above the roofline. An open porch stretches the length of the front (south) elevation. There is a smaller north wing that is two bays wide by one bay deep; the west elevation is flush with that of the main house. This wing is two stories high with the second story within a mansard roof. It has a small L-shaped porch off the east side, which is partially enclosed.

The main impression of the house is one of symmetry, repetition and extensive detailing. There are windows, with hoods and scrolls at top and bottom of the jambs, in every bay at each floor level. The mansard roof is interrupted with a dormer window centered in each bay. The front porch has pairs of narrow posts and an ornamental balustrade. The center bay of the front (south) elevation projects several feet beyond the face of the building; both the roof and the porch follow this projection. A tall double door on the first floor and narrow paired windows on the second and third further distinguish this central bay; each opening is slightly narrower than the one below it. The cornice lines of both the roof and the porch are detailed with narrow brackets. There are two, one-story bay window projections, one on the east side and a second on the west side (corresponding with the front parlors); these bays are detailed similarly to the porch.

S-21 Samuel T. Smith House - Contributing (NR Building No. 16)

The Samuel T. Smith House (Image No. 0011) (see also Archeological Resources) was constructed in three primary construction campaigns that together form an L-shaped plan. There are two, rectangular adjoined two-story masonry sections; the east (east wing) and west (west wing) sections, both constructed in the mid-to-late-18th century. Set perpendicular to the west wing is the two-story, late-19th-century wood frame addition (south wing), which creates the south leg of the L. The east and west wings align on their north and south sides but the west wing is taller. They each have gable roofs clad with slate and with their ridges running east/west. The south wing has a gable roof clad with slate with its ridge running north/south. The south wing is inset a few feet to the east from the west wing and therefore skewing the L-shape slightly. A one-story conservatory fills the space created by this offset at the first floor. Placed at the meeting of the three wings, a wood frame porch wraps the east face of the south wing and the south face of the west and east wings. The fourth set of building components is the north (kitchen) wing and the north porch. These components also appear to date to the late-19th century; the kitchen has been modified significantly since its construction.

The east, west and south wings each have gable roofs clad with slate. The kitchen wing and north porch have shed roofs, and the front porch, the north porch and the west conservatory have shallow hip roofs. The gable roofs have four courses of rectangular slates alternating with four courses of hexagonal slates. Each roof has built-in gutters with integral leaders. There are three decoratively corbelled brick chimneys: one at each masonry gable end of the east and west wings, and one off-center of the west slope of the south wing. The entablature consists of a molded cornice, a sloped but unadorned soffit, and a fascia comprised of a large bead mould, narrow dentil blocks and a flat board beneath. The entablature returns and forms a raking cornice at the gable ends. The entablature of the porch and the conservatory roofs, which are clad with membrane roofing, match that at the main roofs except the soffit is flat. The kitchen wing and north porch shed roofs are clad in asphalt shingles.

The south wing is clad with narrow clapboard and is set on a brick and stone foundation; the brick is above grade

and the stone below. At the south end of the wing, the corners are chamfered at forty-five degree angles creating a two-story bay window projection. At the attic level, the south gable end projects out beyond the angled corners of the bay projection forming a pediment. The fascia returns along the gable end of the south elevation to form a raking cornice and horizontally to form the base of the pediment. The pediment is clad with decorative siding similar to the dentil work. Two elongated consoles under the pediment joined by a teardrop molding serve to frame the angled corner.

The front porch has evenly-spaced decorative turned posts in an Eastlake style. Above the posts, the lintels serve as the entablature and match the main roof entablature. At every post, there are three brackets: elongated Eastlake bracket perpendicular to the façade and larger brackets with an exaggerated scroll that frame the opening parallel to the building face. The brackets visually tie the posts to the entablature. The porch floor and ceiling are narrow tongue-and-groove wood boards. A skirt board runs the perimeter. Brick piers, exposed below the skirt board, support each post. A decorative wood panel with incised stars spans between each pier. The porch is enclosed with removable screen panels.

The exterior finishes at the conservatory match those at the south wing. There is also a perpendicular bracket matching those at the porch located at each window mullion. This creates the appearance that the conservatory is somewhere between a porch and an indoor space.

The east and west wings are finished with stucco and topped by the wood entablature at the roof line. The stucco has been removed from the south elevation at the second floor level. Below the front porch roof, as previously mentioned, the masonry is clad with clapboard that matches the south wing. The east end is clapboard finished with a corner board and corner bead.

The kitchen wing is clad with vertical wood siding with a recessed fillet joint and finished with a flat skirt board and narrow corner boards. Although this addition is older, these are 20th-century finishes.

The north porch is simple. It has two square posts at the north end supporting the lintel and two pilasters at the building face. The plinth blocks and capitals have simple yet classical moldings. The lintels are clad with flat boards with a bead at the base and an ogee molding at the top. The ogee molding returns on the sides both horizontally and as a raking mould. The triangular sides are clad with horizontal tongue-and-groove boards. The floor and ceiling are narrow tongue-and-groove boards. A skirt board that virtually touches the ground disguises the structure below. The porch is one step below the sill of the north door. Many of the elements of this porch have been replaced in the last ten years.

The south elevation of the south wing, at both the first and second floor levels, has a single window centered in each angled corner and a pair of narrow windows centered on the flat section. There is a pair of small windows centered in the attic pediment. The side elevations each have two windows on the second floor that are significantly closer to the north end than the south. On the first floor on the east side, there is a window centered below the south window and a door below the north. On the first floor of the west side there are no openings along the main elevation only at the conservatory. Each side of the conservatory has a set of windows centered in the elevation separated by mullions: there are two on the south face, three on the west face, and one on the north face. All of the windows are 1-over-1 wood-hung sash and are typically floor to ceiling in height. The conservatory windows are similar except the upper sash has a centered clear lite bordered by rectangular colored glass lites with a square lite at each corner.

The main entry door on the south elevation is wide and supports two wood doors back-to-back in the same opening. The doors are identical. Each has one large glazed top panel over a narrow horizontal molded panel,

over three narrow vertical molded panels. The moldings at the panels are bulbous. The glass panel is similar to the upper sash at the conservatory. There is one large lite bordered by colored glass panes. The center lite of the doors is frosted with a floral design.

The fenestration patterns at the east and west wings differ at each elevation. The south elevations at both sections have the most regular fenestration pattern. At the first and second floors there are three evenly spaced masonry openings at the east wing and one at the west wing. All of the openings are windows except the west bay of the east wing, which is an exterior door. On the east elevation, there are no masonry openings at the first floor and two at the second floor. On the north elevation of the east wing, there is a window in the outer east bay and a door in the outer west bay at the first floor, and on the second floor, a window over the door. On the west wing at the north elevation the kitchen addition covers the masonry section at the first floor level and there is a single window at the second floor in the eastern-most bay. On the west elevation, there is one window at the first floor in the northern-most bay, two windows at the second floor, and a single window off-center at the attic level.

The first floor windows at the east and west wings are typically tall, almost floor to ceiling. The second floor windows are average in height except the one window in the west wing on the south elevation, which matches the windows in the south wing. The first floor and the south second floor sashes are 2-over-2 wood-hung sash and the remaining second floor sashes are 6-over-6 wood-hung sash. The single attic window is smaller than the others and is a 4-over-2 wood-hung sash.

The main entry door on the south elevation of the east wing is similar to that at the south wing in that it has two doors set back-to-back in the same opening. The outer door is similar to the adjacent doors; except it has three narrow molded panels. The inner door has four molded panels that are rectangular with their corners truncated to ninety-degree angles. The two lower panels are half the height as the upper. The door is set in a classically detailed frame with a narrow transom and two narrow sidelights separated from the door by pilasters. The north entry on the east wing has a four recessed molded paneled door set in a wood frame. The lower panels are shorter than the upper.

The fenestration at the kitchen wing varies by elevation. On the west elevation, a door is set adjacent to the northwest corner with a window located to the south. On the east elevation, there is a door set slightly off center. On the north elevation, there is one window west of the chimney and two windows evenly spaced, east of the chimney. The windows are of average height and width and are 6-over-6 wood-hung sash. The east door has been clad with the vertical siding. The west door has four molded recessed panels; the bottom panels are significantly shorter than the top.

S-22 Canal Museum - Contributing (NR Building No. 17)

The Canal Museum, constructed c. 1860, is set close to Waterloo Valley Road and its main entrance faces south. The main entrance is within a front porch and two steps above grade. A bluestone path leads to the front porch and ends at two steps to Waterloo Valley Road. There is lawn on both sides of this path and around the house. At the rear are a modern wood pergola and a garden with paths. There is a small outhouse located northeast of the garden.

The Canal Museum is two stories high, three bays wide and one bay deep with a gable roof. The ridge runs east/west. It is a wood frame building with wood siding set on a stone foundation; only a small portion of the foundation is visible above grade. There are two small entry porches, one each on the south and north elevations.

The roof is slate with alternating bands of decoratively-shaped slates and bands of rectangular slates. There are

brick chimneys with decorative corbelled tops at each gable end. The fascia is molded and the soffit is closed, following the slope of the roof. The roof projects over the gable ends and at the eaves.

The building is clad with novelty siding and is trimmed with flat corner boards, a skirt board, frieze boards, and rake boards at the gable ends. The window and door frames are flat stock matching the width of the corner boards with a slight drip edge over the head and a projecting wood sill. The basement windows have simple wood frames in masonry openings and are without trim.

The windows are typically two-over-two wood-hung sash on the first and second floor levels, six-lite casements at the gable ends, and three-lite awning windows at the basement level. The fenestration at the basement, first and second floor levels generally align except at the gable ends. The two exterior doors are wood with six recessed molded panels. The south elevation has an opening within each bay where the door is centered at the first floor level and windows are in all other openings. The east and west elevations each have typical windows in the south bays only and attic windows centered in the gable. The north elevation is atypical. There are no basement windows and the first and second floor windows are centered in the east bay and a second floor window is centered in the center bay; however, the openings in the west bay are not centered. There is a door and a window in the west bay at the first floor with a window above the door at the second floor level.

There is a porch at each first floor entrance. The south porch is centered on the elevation and extends into the east and west bays. The north porch is smaller and frames the door opening. The roofs are flat with an entablature that begins with a projecting molded cornice above a frieze board. The intersection between the frieze and soffit is composed of a molding with curved dentil blocks. A bead accentuates the bottom edge of the frieze board. The frieze conceals the porch lintel, which is supported by single, square columns at each corner. At the south porch, two engaged pilasters are set in line with these columns at the building face where there are no pilasters at the north porch. Both the columns and the pilasters have simple molded capitals and plain plinth blocks; the edges of the shafts are chamfered. There are two full width steps up to the south porch; there are no steps up to the north.

S-23 Administration Building – Non-Contributing (NR Building No. 18)

The two-story Administration Building, moved to its current location from within Waterloo Village in mid-20th century, is three bays wide by one bay deep. There are two additions, one on the east side and one on the west. Each one-story addition is one bay wide by one bay deep. The north and south sides of the east addition are flush with the main building. The west addition is set back slightly from the south elevation of the main building and several feet from the north elevation. All three sections have gable roofs with their ridges running east/west. There is a concrete entry stoop on the south elevation and a small enclosed entry porch on the north.

The main roof is finished with wood shingles. The roof overhangs the perimeter, the fascia is molded and returns to form the rake board, and the soffit is closed. There is a concrete block chimney finished with stucco set off-center to the south on the west wall. There is a scar at both gables indicating removed chimneys. The addition roofs are also finished with wood shingles. The roof overhangs slightly, the fascias are flat, the rake boards are molded, and the soffit is horizontal and closed.

The elevations of the main building and the east addition are clad with novelty siding framed with flat corner boards. At the main building there are frieze boards and rake boards on the gable ends. There is also a frieze board at the top of the south elevation of the east addition. The foundations of both the main house and the additions are concrete masonry units finished with stucco.

The west addition elevations consist of a series of window openings separated by mullions and corner posts at the outer edges. Below the windows is a continuous sill above a wainscot-like base clad in novelty siding. There are four openings on the north and south elevations and three on the west. The gable end is also clad in vertical siding above the window head.

Typically the windows are 6-over-6 wood-hung sash of the same size and shape. The west addition openings are single storm units with screen panels. All of the sash date to the 20th century. The fenestration pattern on the south elevation is regular while the other elevations are not.

Although the Administration Building is similar in architectural styling and plan as the Canal Museum (S-22) and the Poyer House (M-34), it has been moved from its original location and at that time the interior and exterior of the building were significantly altered.

S-24 Waterloo Estate Cottage and Barn – Non-Contributing (NR Building No. 20)

The Waterloo Estate Cottage, constructed c. 1932, is an architect-designed cottage and one of the prototypes of the proposed Lake Waterloo Estates. The architect was Bernhardt E. Muller of New York who was responsible for both the layout of the proposed subdivision and the design for the residences. Muller, who was schooled at the L'Ecole Des Beaux-Arts worked chiefly in the New York region and Opa-Locka, Florida and is noted in his work for suburban residences in New Jersey and larger institutional buildings in Florida.

The main house is a two-story Bungalow-influenced wood-frame house clad with wood shingles at its walls and asphalt shingles at its roofs. The front of the building faces primarily east and is the more decorative of the façades. The building is composed of a two-story center section flanked by one-and-one-half story wings set back slightly from the center section. The center section is three bays wide with a center door flanked by three grouped casement windows. Above the door is a dormered opening set back to create a small second story veranda surrounded by a wood railing. Centered on the dormer are three 6-over-6 wood-hung sashes. The roof over the center section is a gable with its ridge running north/south; the dormer roof projects from the ridge of the main roof at a shallow slope. The gable roofs of the wings are set at the same slope as the main roof with their ridges running north/south. Centered in each wing are 6-over-6 wood-hung sashes. The trim is typically wide plain wood. At the south side of the south wing is a small wood projection with a gable roof with a door centered on it. To either side of the door at the window are typical wood windows with a smaller 6-over-6 wood sash at the gable. A smaller gable is centered on the main gable. The north wing is similar with a window centered on the projection. The rear elevation lacks a formal fenestration pattern with a bulkhead at the north wing, and a small wood-frame entry at the center section.

The barn, which is clad with wood shingles at its walls and asphalt shingles at its roof is set to the southwest of the main building and has a similar orientation as the main house, its front facing east. The building is composed of two sections: a larger west section two-stories in height with a tall one-story section to its north. Both roof sections have gables with their ridges running north/south. Two barn doors occupy the first floor level of the main section with two small 6-lite windows set above at the east elevation. A man door is set off-center to the north at the smaller one-story section. The gable ends are simply adorned with two 6-over-6 wood-hung sash at the first floor of the south elevation and a barn door with diagonal wood boards at the gable end. At the rear is a single man door at the center of the main section with smaller eyelet windows above and a single 6-over-6 sash centered on the north wing.

S-25 Samuel Smith Carriage House – Contributing (NR Building No. 19)

The Samuel T. Smith Carriage House (Image No. 0012), constructed c. 1880, is located along the secondary road that runs in an east/west direction from the Waterloo Estate Cottage (S-24) to the Modern Carriage Building (S-28). The building appears to have been the carriage house of Samuel T. Smith. The front of the building faces south toward the secondary road and the backs of the houses along Waterloo Valley Road. Between the houses and the carriage house is open lawn with some plantings and mature trees. The north of the building abuts a wooded area and a pasture.

The building is T-shaped in plan. The head of the T is to the north and the short perpendicular leg is centered to the south. The head of the T is comprised of two legs, the east and the west. All three legs (east, west and south) are one bay deep by two bays wide. The north elevation, at the head of the T, is four bays wide. The two-story carriage house is constructed on a crawl space. Each section of the T has a gable roof that crosses at the intersection and each have jerkinheads at their gable ends. The roof is wood shingle and a cupola sits where the gables cross. The four-sided cupola has a cross gable roof with four jerkinheads, is clad with wood shingles and has open valleys. The elevations are clad with novelty siding and are ornamented with a projecting wood base, corner boards and a frieze board under the roofline. Each side has a 6-over-6 wood-hung sash set in a decorative molded window surround that is topped by a triangular pediment with ears.

The body of the building is wood frame set on a stone foundation. It is clad with novelty siding with flat corner boards, a skirt board, and frieze board, and at the gable ends with rake boards set just under the roof line. The window surrounds are flat boards with a slight drip edge over the head and a projecting wood sill. The doors, which vary in size and are on roller hardware, have projecting wood hoods covering the rolling hardware.

The windows are typically 6-over-6 wood-hung sash but some of the openings at the second level are fitted with louvered panels rather than sashes. These louvers each have two panels separated by a narrow wood mullion. The wood doors have four panels (two tall over two short panels). The stiles and rails are wide wood with rounded inner edges and the panels are diagonal tongue-and-groove wood boards. The doors are described as either man or carriage doors as a means of implying their size.

The first floor fenestration pattern is irregular. The west gable end has an oversized rolling carriage door in the north corner and a window in the south bay. The adjoining south-facing elevation (southwest) has an oversized rolling door in the east corner; it is slightly larger than the west door. The adjoining west-facing elevation has one window centered. The south gable end has two doors, one in the east corner and the other centered in the west bay. The west door is slightly smaller than the east and both are rolling man doors rather than oversized carriage doors. The adjacent east-facing elevation has two openings; the first is slightly off center to the north, is a rolling man door, and the second is a typical window abutting the door to the north. In the east corner of the adjacent south-facing elevation (southeast) there is set of three windows within the same surround and separated by mullions. The east gable end has a rolling man door in the north corner. The north elevation has four evenly-spaced windows.

There are openings centered in each of the loft level facades, high in each gable end, and on each elevation of the cupola. The openings at the cupola and gable end are typical sash. At the loft level, rolling doors are centered on the south gable end and in the north elevation. Louver panels are centered in the each side south elevation, southwest and southeast, and the east and west gable-end elevations. The remaining elevations, the east-and-west-facing elevations on the south gable, have typical sash.

S-26 The Cottage – Non-contributing

The Cottage, constructed in the 1980s, is located on the south side of the secondary village road with the Peter D. Smith House located to its south and the Carriage House to its north. The front of the building faces south and is surrounded by lawn with two adjacent gardens; each garden is delineated by split-rail fencing. The Cottage has two parts: a two-story section with a one-story section to the west. Both sections are small. The main section is a one bay wide (east/west) by three bays deep (north/south) and two stories high. The west section is one bay wide and one bay deep. It is set back to the north from the front (south) elevation of the main section.

The building is wood frame set on a stone foundation. An oversized brick chimney dominates the north elevation of the main section. Both sections have gable roofs; the main ridge runs north/south and the west section runs east/west. The roofs are clad with wood shingle. The fascia and rake are comprised of a narrow flat board over a slightly wider flat board and the soffit is flat. The chimney is centered on the ridge at the north elevation and rises approximately one foot above the ridge. The flashing at the chimney is copper. At the west section, the roof overhang is approximately four inches at the eaves and an inch at the gable end. The fascia and rake are a single flat board. The soffit is flat.

The elevations are clad with clapboard siding, flat corner boards and a skirt board. Both the window and door surrounds are flat boards have a slight drip edge and a narrow projecting wood sill. The brick chimney is also set on a stone foundation. It is wide at the first floor, and reduces in width at the second floor level. The top of the chimney has a slight decorative corbel. A clay pipe projects through the west gable-end of the west section.

The south elevation of the main section has two evenly-spaced openings on each floor: a door and window at the first floor and two windows at the second floor. The south elevation has a door and a window. The east elevation has three evenly spaced windows on each floor. The fenestration pattern is identical on the west elevation except where the west section encloses the south first floor opening. The west section has a door and a window evenly spaced on the south elevation. The typical windows are 6-over-6 wood-hung sash. The west section window is atypical; it is a 4-lite fixed sash. The doors are vertical beaded board wood planks. There are stone landings at each door.

S-27 Peter D. Smith Carriage House – Contributing (NR Building No. 21)

The Peter D. Smith Carriage House (Image No. 0013) is located at the rear of the village along the secondary road, immediately to the north of the Cottage and a distance north of the Peter D. Smith House. It appears to have been what its name implies, Peter D. Smith's carriage house. The front of the building faces south toward the road. The site slopes downward from the south to northwest at the building. A retaining wall starting at the road meets the southwest corner of the building foundation. The grade then drops progressively to the northwest down to a marsh and exposing the full height of the foundation's west side. The retaining wall creates a level driveway at the south elevation. The east side is open lawn and the north is a paddock enclosed by wooded area.

The building is rectangular in plan, four bays wide (east/west) by three bays deep (north/south). Each of the four elevations has a gable-end creating a cross-gabled roof topped by a cupola at the intersection. The building is two-and-a-half stories in height with the steeply-pitched roof containing a loft area, which adds height to its overall appearance. The gable roofs are clad with wood shingles. The roof overhangs at the gable-ends and at the small fascia at each end of the north and south elevations. The fascia and rake are continuous at the perimeter of

the building and the closed soffits follow the roof slope. A narrow boxed wood chimney rises out of the north slope along the east elevation. A "hay-hood" projects several feet beyond the fascia at the peak of the west gable-end. A four-sided cupola marks the intersection of the four ridges at the main roof. The cupola has a cross-gabled roof clad with wood shingles. Each side is clad with clapboard siding and is ornamented with a projecting wood base, corner boards and a frieze board. Each side has a 6-over-6 wood-hung sash set in a flat window surround and the perimeter base serves as the sill for the windows.

The body of the building is wood frame set on a stone foundation. It is clad with clapboard siding, flat corner boards, a skirt board, and a frieze board set just under the roof line. Both the window and door surrounds are flat boards with slight drip edges and a projecting wood sill. The rubble-stone foundation is barely visible on the south and east elevations but, as the grade slopes dramatically along the north elevation to the west, it is approximately a full-story deep at the northwest corner of the west elevation. There are small evenly-spaced vent holes set just below the skirt board along the north and west elevations.

The windows are typically 6-over-6 wood-hung sash. The wood doors vary in size and are all set on rolling hardware. They have four equal panels of diagonal tongue-and-groove wood boards. The angle of the panels is book-matched on the right side versus the left. The stiles and rails are wide wood with rounded inner edges and rounded corners. The doors vary between man doors and or carriage doors depending on their size. The pattern of windows is fairly consistent and is only interrupted by the occasional door. The door pattern is more random and is based on the original pattern of use.

S-28 Modern Carriage Building – Non-Contributing

The Modern Carriage Building, constructed c. 1980, is banked to the north, and the south side overlooks a small pond (not maintained). The grade slopes to the east and is banked along the west side of the building, by a stone retaining wall. A drive runs along the north side of the building but ends abruptly at a set of landscape stairs to the west leading to the modern gazebo. To the north of the building is a small patch of woods.

The building is wood frame with a stone foundation, which is fully exposed on the south side, and below grade on the north. On the east side, the grade drops naturally while a retaining wall supports the banked earth along the west side of the building to the south. The building is divided into two distinct but attached sections, the west side and the east side. The west side is the larger of the two and is five bays wide by three bays deep. The east side is three bays wide by two bays deep. Each has gable roofs clad with wood shingles and their ridges running east/west; however, their ridges do not align. The wall cladding is vertical board and batten siding that is unfinished with the siding at the gable end set proud of the siding below. The first floor of the west side cantilevers several feet over the foundation on the south elevation; the underside of the cantilever framing is exposed. There is a large stone masonry chimney centered in the west gable end.

At the ground floor level of the west side on the south elevation, there are a series of door and windows. The masonry openings at both the far east and far west bays are enclosed by unique doors. The west bay opening consists of a pair of oversized swing doors constructed of diagonal double beaded wood boards. The east bay opening has a single swing man-door constructed of diagonal double beaded wood boards. The remaining eight evenly spaced openings (two in each bay) alternate between window openings (to the west) and door openings (to the east). The doors are all single Dutch-type doors constructed of diagonal double-beaded wood boards, and the windows are all six-lite hoppers.

The ground floor level of the east side on the south elevation has a single large masonry opening that is framed by a single heavy timber post at the center and one at each side of the opening. Each post has diagonal braces and a wood shingle pent roof spans the length of the elevation protecting the opening.

At the first floor level of the west side, there are large first floor door openings centered in both the north and south elevations. Each opening has a pair of oversized swing doors constructed of vertical double beaded wood boards. On the south elevation the opening is in-filled with a large forty-five-lite wood fixed sash. A wood ramp rises to the north door. There are also two regular sized doors on the north elevation: one is located to the east of the large doors in the west side and one is centered on the north elevation of the east side. These doors are constructed with vertical beaded board. The east side has a series of 6-over-6 wood-hung sash at the first floor level: one to the east of the door on the north elevation, two on the east elevation, one in each bay, and one each in the two outer bays on the south elevation. Each window has a single shutter comprised of vertical boards. A door opening in the south gable end has a pair of doors comprised of vertical boards.

S-29 Rutan Cabin – Contributing (New Jersey Register ID#2592)

The Rutan Cabin (Image No. 0014) is a log cabin that was moved from its original site in Frankford Township, Sussex County, New Jersey to its current location in Waterloo Village in 1989. The building is set to the east of Heritage Road and the front of the cabin faces east toward an open meadow and a marshy area beyond; the Peter D. Smith Carriage House is visible through the woods past the marshy area to the southeast. The open field is enclosed in areas by split-rail fencing. There are a number of small wood frame outbuildings within the field and a garden area fenced in to the north; the fencing at the garden uses vertical boards rather than split rail fencing. These smaller buildings are also non-contributing resources numbering seven including a recreated well, chicken coop, pig house, outhouse, corn crib, dog house and pens.

The Rutan Cabin is composed of two sections, the north and the south. The north section is independent of the south section making the south section three-sided except at the attic level where a fourth wall of logs connects the other three sides. The Cabin is one-and-a-half stories and set on a shallow basement constructed when the house was moved to the site. Each section is one bay wide by one bay deep and the north section is slightly taller than the south. A porch stretches across the front (east) elevation of the north section.

The Cabin has two separate wood shingle gable roofs. Both have ridges that run north/south; the ridge of the south roof is slightly lower than that of the north. A rectangular stone veneer chimney rises above the roofline at the intersection between the two sections. The north roof extends slightly beyond this chimney.

There is no overhang at the gable ends, and at the west elevation, the overhang is approximately four inches. The east eaves of both roofs extend well beyond the edge of the roof. On the north section, this six-feet-deep overhang is at a slightly shallower pitch than the main roof and covers the porch. It is supported by cantilevered joists extending from the building. On the south section the overhang is five feet deep and remains at the same pitch as the main roof. It is supported by two posts at each corner and a girder spanning between them.

The west and south sides are finished with unpainted clapboard siding while the east and north facades have exposed logs with mortar chinking. The log corners are notched with half dovetail joints. The north gable end is finished with clapboard siding. There are corner boards at each corner finished with clapboard and one covering the intersection between the buildings. The building sits on a concrete foundation.

The east elevation is dominated by the overhanging roof. On the south end the posts supporting the roof are logs that are un-milled, only debarked. The north porch has a wood plank floor that is several inches below the first

floor level. It is supported by concrete piers.

There are two windows on each elevation except the east, which has one window and two doors. The north and south elevations have one window centered on each, the first and attic floor levels. The attic windows are fixed nine-lite sash, the first floor sashes are 8-over-8 and 6-over-6 wood-hung sash on the north and south, respectively. The west elevation has a pair of small six-lite casements at the south end of the north section and a 6-over-6 wood-hung sash slightly off center to the north in the south section. The east elevation has a vertical plank door centered in each section. There is a fixed nine-lite sash to the south of the door in the north section. The north door is accessed via the porch. The floor level is one step up from the porch floor. A square thin-slab stone landing set on a rubble-stone base provides access to the south door. There is a small concrete landing centered to the east of the landing.

S-30 Various Farm Buildings – Non-Contributing

There are a number of agricultural support buildings on site that date to around 1970s and are non-contributing existing resources. These are generally located in the northeast corner of the property set to the north of the core historic buildings including the secondary agricultural buildings that date to the Smith era. These buildings, four in total, include a small stone and wood smoke house, a three-sided horse barn, an open shed, and a small cottage or enclosed shed. Each building has gabled roof clad with wood and the wood frame walls are finished with weathered vertical board siding that is not painted. Both the horse shed and cottage have multiple-lite wood sashes. The construction is simple and made to look rustic.

S-31 Gazebo – Non-Contributing

The wood-frame gazebo is located east of the Comfort Station. It has eight sides and is open on each side with square columns with plinth bases set at each corner supporting a shallow hip roof clad with asphalt shingles. Center on the roof is a small cupola with wood paneled base supporting a conical roof clad with flat-seam copper. The columns are supported by concrete posts. The floor within the gazebo is narrow wood planks and wide wood stairs are set at every other opening.

S-32 Homestead Barn – Contributing (NR Building No. 7)

The Homestead Barn (Image No. 0015), constructed c. 1860, shares the same site as the Homestead and sits to the northwest of the Homestead. The barn is one of many former outbuildings associated with the Homestead and possibly served as its carriage house. The north side of the building is banked where the embankment retains the old forge pond along its south side. The grade tends to slope to the north at the perimeter of the building.

The Homestead Barn is two stories high, two bays wide and two bays deep. It is slightly wider (north/south) than it is deep (east/west). It has a gable roof with the ridge running north/south and has a cupola centered on the roof. The body of the building is finished with wood clapboard and corner boards. The foundation is rubble stone. The east and south elevations are both "front" elevations as reflected in the fenestration.

Until recently, a one-story "bank" extension projected off the north side. It had a gable roof and a full basement that was accessible from its east side. The first floor was presumably wood frame matching the body of the building. Scars in the main building and the west wall of the foundation remain in place.

The roof is clad with slate shingles. It overhangs the elevations at the eaves and gable ends. The fascia and rake

boards are flat wood. The soffit is closed and angles at the eaves. The cupola is detailed similarly to the body of the building. It has four windows, one centered on each elevation, corner boards at each corner and clapboard siding. The window sill wraps the entirety of the cupola. It has a small hip roof with a weathervane. The roof has a small overhang with a closed soffit.

The fenestration is not in a distinct pattern from elevation to elevation. The south elevation has a window opening in the upper gable end and one on the first floor centered in the east bay. There is also an oversized rolling barn door in the west corner. At the east elevation, a swinging man-door is centered at each floor level and each has two windows that flank them. On the first floor, there is also an oversized rolling barn door in the south corner. There is evidence of changes around the first floor swinging door. The north elevation has a window opening centered in the gable and on the first floor. A rolling barn door is located in the south corner of the second floor. The west elevation has two windows centered in each bay on each floor directly over one another.

The first floor and cupola windows are 6-over-6 wood-hung sash. The second floor and gable-end openings are louvered panels. Each panel has two vertically rectangular sets of louvers separated by a narrow wood mullion. The panels on the north and west sides have horizontal heads. Those in the south gable end and on the east elevation have half-round heads. The surround at the south gable end has a peaked top following the roof pitch. The two swinging doors are constructed of vertical planks. The rolling doors are constructed of vertical boards.

S-33 Seymour R. Smith Carriage House – Contributing (NR Building No. 6)

The Seymour R. Smith Carriage House, constructed c. 1880, faces south and is set adjacent to the modern service buildings, such as the Comfort Station and the Meeting House. A picnic area and the modern gazebo are located to the building's north, and a sunken 20th-century patio occupies the southeast corner of the site. The building is T-shaped in plan. The head of the T is to the north and the short perpendicular leg is centered to the south. The head of the T is comprised of two legs, the east and the west. All three legs (east, west and south) are one bay deep by two bays wide. The north elevation, at the head of the T, is therefore four bays wide in total. Each section has a gable roof that crosses at each intersection. The gable ends (east, west and south) of the roof are detailed with jerkinheads. The roof is slate and a cupola sits at the center of the roof intersection. The building is two stories high, constructed on a full basement and is built into a hillside. A retaining wall, extending from the east corner of the south gable end, creates a courtyard to the southeast of the building. The basement is fully exposed at this location. A 20th-century one-story addition with gable roof is attached to the east end of the building.

The slate roof pattern is alternating bands of decorative-shaped slates with bands of rectangular slates. A buff-brick chimney is located on the south side of the east leg. The fascia is molded and the closed soffits follow the roof slope. The cupola is four sided with a cross gable slate roof with four jerkinheads and a decorative weathervane. The cupola is clad with novelty siding and ornamented with a projecting wood base above the ridge line, corner boards and a rake board under the roofline. Each side has a 6-over-6 wood-hung sash set in decorative molded surround that is topped by a triangular pediment with ears.

The building is wood frame set on a stone foundation and is clad with novelty siding with flat corner boards, a skirt board and frieze board, and at the gable ends with rake boards just under the roof line. The window surrounds are flat boards with a slight drip edge and a projecting wood sill. The doors, which vary and typically slide, have a slightly projecting wood hood over the rolling hardware. The windows are typically 6-over-6 wood-hung sash. The sliding doors are four-panel wood with two tall panels over two short. The stiles and rails are

wide wood with rounded edges and the panels are diagonal tongue-and-groove wood boards. The doors are either oversized carriage doors or regular-sized man doors. The first floor fenestration pattern is irregular. The west gable end has an oversized carriage sliding door in the north corner and a window in the south. The adjoining south-facing elevation (southwest) has one large opening that has a door hood but is in-filled with three 16-lite windows; the muntins on these windows are applied. The adjoining west-facing elevation has one typical window centered. The south gable end has two man doors, one in the east corner and the other close to the west corner. The adjacent east-facing elevation has two openings; the first, slightly off center to the north, is covered with a door hood, and has a twelve-lite French door fixed in the opening, and the second is a typical window abutting the door to the north. The adjacent south-facing elevation has two typical windows. The first floor of the east gable end is enclosed by the modern addition. The north elevation has a door slightly off center to the east and three evenly-spaced windows across the facade. This door is a swing door with a similar appearance as the typical sliding doors with a surround similar to the windows. A ramp rises from the west along the north elevation to this door. The second floor is slightly irregular between the locations of windows versus doors, but it consistently has openings centered in each elevation. The foundation has limited fenestration. There are two three-lite small awning windows on the north elevation within the masonry openings. The frame section of the lower level has a typical window centered in the façade and a typical wood sliding door to its east.

The 20th-century addition abuts the east elevation of the main building with the first floor level set approximately four feet below that of the main building. The addition is wood frame, is clad with novelty siding and is set on a stone foundation. Each elevation has corner boards, frieze boards, rake boards and a skirt board. The door and window surrounds match the window surrounds of the main building. The addition has a wood shingle gable roof with its ridge running east/west. There is a small brick chimney set slightly off center on the north side. The fenestration is simple. A door constructed of narrow vertical wood is centered on the north elevation. The east gable end has one typical window in the north corner and a large louvered vent centered in the gable end. The south elevation has two sets of openings. The east opening has four, 6-over-6 wood-hung sash separated by wood mullions. The west series of opening is composed of three, 6-over-6 wood-hung sash, also separated by mullions. A low retaining wall extends from the northeast corner and has a set of steps leading down to the southeast courtyard. On the south elevation, two sets of steps at either end of the addition lead up to a narrow patio abutting the wall and align with the first floor level. The patio is enclosed on the south and east sides by a wood balustrade.

M-34 Poyer House – Contributing

The Poyer House, constructed c. 1860, is set on the Morris County side of the Musconetcong River and to the southwest of the Inclined Plane 4 West. The building is fairly close to the river and there is evidence in the yard of outbuildings located between the house and river (see also Archaeological Resources). The wood frame house is two stories high, three bays wide, and two bays deep with its main entrance facing north and set center on the elevation. The building is set on a stone foundation, is clad with wood siding at its exterior walls, and has a gable roof clad with its ridge running east/west. Two brick chimneys are inset from the end walls at the gables.

The roof is clad with slate and brick chimneys with decorative corbelled tops inset of the exterior walls at each gable end. The fascia is molded and the soffit is closed, following the slope of the roof. The roof projects over the gable ends and at the eaves.

There are two small entry porches, one each on the south and north elevations. The south served as the front entrance and is open. The rear was enclosed. Both porches are in poor condition. The building is clad with

wood siding and is trimmed with flat corner boards, a skirt board, frieze boards, and rake boards at the gable ends. The window and door frames are flat stock matching the width of the corner boards with a slight drip edge over the head and a projecting wood sill. There is a bulkhead in the north corner of the west basement wall.

The windows are typically 6-over-6 wood-hung sash on the first and second floor level; the gable ends windows are covered with plywood. The fenestration at each floor level generally aligns except at the gable ends. The south elevation has an opening within each bay where the door is centered at the first floor level and windows are in all other openings. The east and west elevations each have typical windows in the south bays only and attic windows centered in the gable. The north elevation is atypical. There are no basement windows and the first and second floor windows are centered in the east bay and a second floor window is centered in the center bay; however, the openings in the west bay are not centered. There is a door and a window in the west bay at the first floor with a window above the door at the second floor level.

ARCHEOLOGICAL RESOURCES

The Waterloo Village Historic District contains a wide variety of surficially visible and buried archeological resources on both the Sussex and Morris County sides of the Musconetcong Valley. Archeological remains are also strongly suspected along the river corridor, submerged beneath the waters of the Musconetcong and Lake Waterloo. Anticipated archeological resource types include: industrial and residential structural remains and deposits from the period circa 1760-1795 associated with the ironworking community of Andover Forge; substantial remnants of the Morris Canal (S-1/M-1), built in 1831 and modified around 1850 (including an inclined plane, plane tender's house, guard lock, canal dam and the canal prism); traces of the Sussex Mine Railroad, built in 1849-50, and the Sussex Railroad (M-10), built in 1854; industrial remains of the Waterloo Ice Company facility (M-12) from the period circa 1888-1917; and structural features and domestic deposits relating to the residential occupation and commercial use of numerous standing and destroyed buildings within the 19th- and 20th-century village of Waterloo. The locations of these multiple archeological resources are shown on three accompanying maps, one addressing 18th-century features (Figure No. 1), the other two from the 19th and early-20th centuries (Figure Nos. 2 and 3).

Eighteenth-Century Archeological Resources

Historic Environment

In broad terms, the late 18th-century industrial hamlet of Andover Forge was spread out along the Sussex County side of the Musconetcong River, covering an east-west distance of roughly 1,000 feet and extending back roughly 500 feet north from the river's edge. A road approximating today's Waterloo Village Road ran east-west, parallel to the river, with houses and outbuildings ranged along its northern side. Industrial and service facilities, some of them water-powered, lay to the south, between the road and the river. Another road wound down the hillside on the Morris County side of the Musconetcong, crossing the river on a bridge and intersecting the east-west road in the heart of the hamlet. At least one outlying house was situated on the Morris County side of the river. The surrounding landscape, at the peak of the iron mining and ironworking era in the later 18th century, would have been extensively deforested as a result of ore extraction and woodland being exploited by colliers producing charcoal for the forges and furnaces.

It is difficult today to accurately discern the historic environment of the 18th-century industrial community of Andover Forge. Nineteenth-and 20th-century land use and development have obscured many of the community's earlier cultural features and their spatial relationships. Only a handful of 18th-century buildings and certain critical

linear features (notably the Musconetcong River and portions of the road network) still survive in the modern landscape to provide a sense of what Andover Forge was once like. Fortunately, with the assistance of archival research, field observation and landscape analysis, it is possible to re-create with reasonable confidence the basic shape and key features of the late colonial and Revolutionary War-era ironworking settlement. Archeological study has the potential to answer many questions about the specific location and extent of colonial activities.

In the mid-18th century, prior to European settlement and mineral exploitation, this section of the Musconetcong Valley, located astride the ill-defined boundary between the provinces of East Jersey and West Jersey, was densely wooded and still awaiting formal survey and subdivision. The river flowed from east to west, passing through a narrow stretch of valley where Waterloo would later be situated. This natural constriction in the topography was an advantageous spot for the development of waterpower and a place where the river could be conveniently bridged. The Lawrence line, surveyed in 1743 as the official boundary between East and West Jersey, also crossed the Musconetcong in this same location.

The configuration of the Musconetcong valley floor as it would have appeared in the 1750s is today largely submerged. The damming of the river for the construction of the Morris Canal in the early 1830s at the downstream end of the colonial settlement, and the installation of another slightly higher dam in the 1880s in support of the local ice making industry, roughly 1,000 feet upstream of the canal dam, have caused the drowning of the river bottom landscape of the Andover Forge era. Submerged beneath the waters and silts of the Musconetcong, at depths of at least 6 to 8 feet below the modern river level, are suspected to lie the archeological remains of parts of the hydropower system of the forge and other mills. The various 18th-century industrial facilities likewise are projected to lie beneath fill and structural features built in the mid-19th century. Land that is today below elevation 650 feet above sea level on the Sussex County side of the Musconetcong (i.e., the core area of 18th-century industrial activity) bears very little resemblance to its colonial reality, but retains a high degree of archeological potential, both for mid-19th-century and late colonial/Revolutionary War-era remains.

Northeast of the Waterloo Village, on the northwestern shore of what is today known as Lake Waterloo, an "island" landform exists where oral and secondary sources report that a burial ground was situated. Native American interments were at one time thought to be present here, but avocational archeological explorations and subsequent reconsideration by archeologists seem to suggest that this was the site of an early historic cemetery containing the burials of early European inhabitants of Andover Forge and Byram Township.[2] Reference to this landform as an island is misleading; it was created in the late 19th century as a result of stream channelization work designed to improve the efficiency of the ice ponds of the Waterloo Ice Company. In the 18th and early 19th centuries, when it was most likely in use as a place of burial, this landform would have existed as a promontory-like terrace adjacent to the main Musconetcong Valley, accessible from Waterloo Road.

[2] Wright, Kevin, "Fact and Fiction about County's Heritage," Editor's Mailbag, *New Jersey Herald*, December 30, 1986; Kraft, Herbert C., "Archaeological/Historical Cultural Resources Survey of the Island Site Being Proposed for Construction of a Late Woodland Lenape Indian Village at Historic Waterloo Village," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1987; Kraft, Herbert C., "Archaeological/Historical Cultural Resources Survey of the Area in and about the Proposed Trail Leading to the Island, Waterloo Village, Byram Township, Sussex County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1987; Wright, Kevin, "Waterloo, Part 4: Buying Time," River Dell, NJ Patch, 2012 (http://riverdell.patch.com/blog_posts/waterloo-part-4-buying-time; Internet; accessed on March 15, 2013).

Industrial Sites

Key documents in piecing together the lay-out of the Andover Forge settlement in the 18th century are: an advertisement offering the ironworks property for lease in 1770[3]; a lease agreement between Joseph Turner and Archibald Stewart, dated November 23, 1782, with an attached schedule of needed repairs[4]; and an agreement concerning water rights between the Morris Canal and Banking Company and John Smith, dated January 7, 1831.[5] Each of these documents supplies clues to the locations and arrangement of buildings and waterpower features, allowing the shape of the settlement to be broadly sketched in the following paragraphs.

Historic maps show unequivocally that the forge was situated on the north (Sussex County) side of the Musconetcong River in East Jersey very close to the Lawrence line (Figure No. 4).[6] From the schedule of repairs in the 1782 lease agreement, it is clear that the forge site lay close to the Musconetcong, less than 100 feet from the river's edge, and probably just upstream of the bridge crossing. The 18th-century bridge is thought to have been located on or close to the site of the 19th- and 20th-century river crossing, just downstream from the dam. The repair schedule notes "[t]he Bridge was carried away when the dam broke and has been built at the Company's Expence on account of the road not being laid in Sussex, a good deal of the timber which is down the river might be brought back all the planks are wanted." An early timber bridge on stone abutments is thus hypothesized at or just downstream of the dam. A reference to an 80-foot breach in the dam needing repair in 1782 would seem to imply a "tumbling dam" placed across the river, essentially a wing dam and weir designed to funnel a portion of the water flow into a mill/forge hydropower system.

The 1782 repair schedule called for a new "head gate & posts to the race," adding that the "lower side on the floom in the race wants a wall about 70 feet long and eight feet high which must be filled up with Ground the wall may be made with Loggs." [sic] From this statement it is inferred that a head race, approximately 70 feet long, provided waterpower to a mill seat, in this instance considered to be the forge, situated somewhere in the vicinity of the present-day gristmill and sawmill. The placement of the forge in this location is reinforced by the abundance of ironworking slag on the ground surface around the sawmill and reports that ironworking debris and possible forge-related foundations were observed when the sawmill (S-17) was reconstructed in the early 1980s.

Another clue useful in pinpointing the forge is the identification of the "coal house" where charcoal was stored for use in the forge hearths. The 1782 repair schedule itemizes the coal house as being 40 by 70 feet and it is a reasonable assumption that this building will have been located in close proximity to the forge. In the 1830s, as part of modifications to the old industrial core of the village stimulated by the building of the Morris Canal, the coal house was converted into a new gristmill that replaced the earlier gristmill located a short distance downstream to the west (see below). This new gristmill (S-18), the current gristmill, measures exactly 40 by 70 feet, thus affirming its original use as the coal house. The building also has a large door opening at ground level on its northern gable end, which likely served as the main conduit for charcoal being moved into the forge.

The dimensions and layout of the forge can also be reconstructed to some degree from the documentary evidence. The 1782 repair schedule indicates that the building was surrounded by flumes on three of its four sides ("toward the river," "towards the Coal House" and "towards the dam"), framing a structure measuring slightly less than 30 by 50

[3] GenealogyBank.com, *Pennsylvania Gazette* (Philadelphia, PA), October 4, 1770, Issue 2181, p. 4.
[4] Historical Society of Pennsylvania, Chew Family Papers, New Jersey Land Papers, Series 21, box 768, folder 29.
[5] New Jersey State Archives, Morris Canal and Banking Company, Title Paper Files, Deeds, Envelope #524.
[6] Historical Society of Pennsylvania, Chew Family Papers, New Jersey Land Papers, Series 21, folders 11, 14-17, 23; flat file 250.

feet in plan, with its longer 50-foot dimension being oriented east-west. This building footprint also roughly corresponds to that of the sawmill built in the 1830s at the same time as that of the nearby gristmill and it is hypothesized that the sawmill may well have re-used substantial parts of the forge's foundations. Downstream of the forge, the 1782 repair schedule notes that "[a] new bridge is wanted over the tail race to the forge." It is thought that this span was positioned west of the forge and would have carried the road leading from the bridge to the road that ran east-west through the settlement along the north bank of the river.

From the 1782 repair schedule and the advertisement of 1770, it is evident that the forge contained four hearths (most likely two finery and two chafery hearths), each with a bellows powered by a waterwheel, and two trip-hammers, also each powered by a waterwheel. Based on this information, the overall building dimensions and the flume configuration, the forge is thought to have been modeled after similar facilities in England designed and built by the noted engineer John Smeaton (such as the Kilnhurst Forge, near Rotherham in South Yorkshire [Figure No. 5]).[7] Allen & Turner, through their many trading British contacts and connections with English and Welsh ironworks, are likely to have been well-informed about the most up-to-date forge designs in the 1750s and 1760s, as is evident from one of the firm's surviving letterbooks from this period.[8] The establishment of the Andover Forge appears to have been a direct beneficiary of imported British ironworking technology.

Several deeds from the 1760s into the 1780s, as well as the 1770 lease advertisement and the 1782 lease and repair schedule, make reference to a gristmill and sawmill being in existence at Andover Forge.[9] From the 1782 repair schedule it is clear that these two mills were situated close to one another and served by a single flume. The gristmill operation was powered by a 16-foot-diameter breast wheel. The 1831 agreement between the Morris Canal and Banking Company and John Smith provides critical information on the location of the gristmill. In agreeing to construct "a Culvert or acqueduct and raceway" under the canal at the guard lock, the Morris Canal and Banking Company was to build the raceway starting "at the seat of the old grist mill and to run [it] to and through the said aqueduct or culvert to the River below and to be sufficient to drain the water as low as the bottom of the old tail races of the old forge and Grist Mill … the said race to be well planked or walled for one hundred feet below where the old forge stands and covered for the same distance." This places the 18th-century gristmill (and sawmill) between the forge site and the guard lock, probably somewhere in the vicinity of the structure that is today known as the blacksmith shop. It appears that hydropower was fed to the gristmill (and sawmill) via its own raceway, independent of that serving the forge, although it may have been drawn off from the same wing dam. No obviously visible remains of the gristmill and sawmill survive today, but these may yet survive deeply buried beneath the canal-era land modifications.

Other industrial and service-related facilities are mentioned in the 1782 repair schedule for Andover Forge, notably a wheelwright shop, a blacksmith shop and magazine, and stables. The blacksmith shop and magazine were contained in the same building, which measured 21 by 45 feet in plan. The magazine perhaps dates from the Revolutionary War period, when the Continental Army's use of the site may have required a measure of military defense for the forge operations (or, perhaps less likely, the magazine dates from the earliest years of Andover Forge, *circa* 1760, when the settlement was on the frontier during the French and Indian War). The locations of the wheelwright shop, blacksmith shop/magazine and stables are not known, but they probably occupied roadside sites within the industrial

[7] Royal Society, London, England, General Plan of Kilnhurst Forge as it was executed, Ground plan, 1:48, Ink wash. 1765. John Smeaton, Volume Two, Folio 99v & 100. n.d.
[8] Historical Society of Pennsylvania, Allen & Turner Letterbook, 1755-1774, LCP167.
[9] New Jersey State Archives, West Jersey Deeds AB 171 & 182

core of the hamlet. Documents also make reference to stockpiles of pig iron and at least one cinder heap on the riverbank. While pig iron is unlikely to have been left unprocessed on site, archeological traces of cinder heaps may well survive, again most likely within the industrial core.

Domestic Sites

Eighteenth-century domestic sites at Andover Forge were predominantly ranged along the terrace on the north side of the east-west road running through the settlement. The present-day cultural landscape contains three principal stone dwellings (the so-called Homestead (S-14), Waterloo Hotel (S-16) and Samuel T. Smith House (S-21)) that on architectural grounds may date from the 18th century, or at least from the pre-canal era. All three buildings display a similar southwesterly orientation focused on the industrial core that is in contrast to the other later buildings that adopt a more southerly aspect.

The archival record makes several references to dwellings and outbuildings, but matching these to the surviving architecture is by no means straightforward. The 1770 lease advertisement noted earlier speaks of "commodious Houses for a Manager and Forgemen," but does not specify how many buildings are involved. The repair schedule attached to the lease agreement of 1782 is much more informative, but raises numerous questions. In this document are itemized, successively: "Potts's Stone House"; a dwelling house measuring 25 by 35 feet in plan; a smoke house and two log stables behind the dwelling house; a kitchen "belonging to the dwelling House …. eighteen by thirty feet"; "The Stone House where Jack Cook lived is now a Barn"; and "The House over the River." The locations of each of these buildings is far from certain, and many may no longer be standing, but some may be tentatively correlated with the three earlier stone dwellings identified above.

The Waterloo Hotel is the strongest candidate for the dwelling house, which probably corresponds with the forge manager's residence. This building occupies the prime residential spot in the settlement overlooking the road intersection, the bridge over the river, the forge, and the gristmill and sawmill. The main block of the Waterloo Hotel measures 25 by 32.5 feet in plan, which is reasonably close to the 25 by 35-foot footprint given in the 1782 repair schedule. If this attribution is correct, then the surrounding lot may be expected to yield the archeological remains of a smokehouse, two stables and what may have been a detached kitchen. An unreferenced secondary source that states "[i]n 1837 John Smith converted the old Forge Master's Dwelling into a Tavern House" would seem to support this interpretation.[10]

The Homestead, the original portion of which was a three-bay side-hall house of similar size to the main block of the Waterloo Hotel (and therefore another potential candidate for the 1782 dwelling house), occupies a location that is secondary to that of the Waterloo Hotel, further from the center of the settlement. This building may correspond to "Potts's Stone House." It is also not impossible that this building dates from after the forge went out of operation, but before the Morris Canal came through, i.e., *circa* 1795-1830.

Of the three potential surviving 18th-century buildings, the Samuel T. Smith House is the one furthest removed from the heart of the hamlet. Its peripheral location perhaps argues for this structure having been a barn at some point in its history, which would seem to conform with the unreferenced secondary source that "Nathan Smith remade an old

[10] Wright, Kevin, "Standing on Common Ground, No. 2: Waterloo Synonymous With History-Changing Defeat? Part 1," River Dell, NJ Patch, 2011 (http://riverdell.patch.com/blog_posts/standing-on-common-ground-no.2-waterloo-synonymous-with-history; Internet; accessed on March 15, 2013).

stone barn of the Andover Iron Company into a dwelling, later known as the Smith Homestead."[11] Another possibility is that this building was the stone house where Jack Cook lived, which by 1782 had been converted from a dwelling to a barn. Under this scenario, the Samuel T. Smith House would have begun life as a dwelling, been converted to a barn *circa* 1780, and then converted back again to a dwelling in the 1830s.

Without question, several of the buildings mentioned in 18th-century documents are no longer standing. The "House over the River," for example, has disappeared, its site most likely lying close to the road near the foot of the inclined plane. No 18th-century outbuildings are extant. One wonders also if the forgemens' houses, including accommodations for up to "six Negroe slaves" (as mentioned in the 1770 lease advertisement), were of less durable frame, as opposed to stone, construction and that these have long since vanished from the above-ground landscape. Clearly, archeological inquiry offers the best hope for piecing together the residential layout of the Andover Forge settlement and clarifying the date and function of the surviving earlier stone buildings at Waterloo Village.

Nineteenth- and Early Twentieth-Century Archeological Resources

Historic Environment

The 19th-century historic environment of Andover Forge and Waterloo was dominated by transportation developments (principally the Morris Canal and Sussex Railroad) accompanied by commercial and residential growth. Industrial activity in the village waned somewhat, except for a late 19th-century surge in ice making. Documentary evidence continues to inform our reconstruction of the historic landscape, bolstered by the addition of more detailed maps and the appearance of a wealth of photographs, allowing for the creation of a more complete picture of the settlement. Additional houses and associated outbuildings were built along Waterloo Village Road further to the southwest and northeast of the 18th-century core of the village, with garden lots, pastures and farm fields extending from these houses across the valley bottom to the base of the rocky hillside to the north. The center of the village, where Waterloo Village Road met with the Stanhope-Waterloo Road, was likely a busy intersection. Across the river in Morris County, at some point in the later 19th century, a new road was built heading southwest from the Stanhope-Waterloo Road to Hackettstown. On the outskirts of the village, farming and industry in the late 18th and early 19th centuries will have caused continuing deforestation of the surrounding hillsides through the conversion of woodlots to pasture and agricultural fields and the harvesting of lumber for fuel and construction. By the beginning of the 20th century, the period from which many of the historic photographs of the village date, the hillsides are shown covered with trees; this is the result of subsequent reforestation. The numerous stone field rows still visible today are testimony to these rural land use processes.

The construction of the Morris Canal in 1830-1831 and the Sussex Railroad in the 1850s wrought the most radical changes on the environment. As part of the canal construction the Musconetcong River was fully dammed creating a larger slack water section to facilitate both the continuation of water-powered industry in the village and the crossing of the river by canal boats. A channel for the canal was placed parallel to and north of the river downstream of the village, while the hillside on the Morris County side was cut into for the inclined plane. The route of the Sussex Railroad was embanked and cut laterally from northeast to southwest across the Morris County hillside. The Stanhope-Waterloo Road remained, winding its way down the hillside under the railroad and across the inclined plane (at grade) before crossing the Musconetcong on an embankment and bridge, on or close to the 18th-century alignment, above the canal dam. The earthmoving activities associated with the construction of these large-scale

[11] Wright, "Standing on Common Ground," 2011.

transportation features and the concomitant dissection of the landscape probably restricted the land available for farming on the southern side of the river and allowed opportunistic trees and brush to flourish on unused ground.

The installation of a dam across the river by the Waterloo Ice Company in the early 1890s created a large pond for ice upstream of the village, flooding the low-lying meadows and fields in the winter ice season. The five large ice houses and associated elevators and powerhouse built to handle and store the ice were imposing structures clearly visible from the village, although the ice harvesting era lasted less than 30 years and, along with most other features on the Morris County side of the river, have been progressively overrun by successional forest since the mid-20th century.

Morris Canal and Related Archeological Sites (S-1/M-1)

The prism, lock and dam of the Morris Canal are significant landscape features within the Waterloo Village Historic District and they play a major role in the present-day interpretation of the settlement. In addition to these canal elements, many physical features related to the inclined plane on the south side of the Musconetcong River are still visible in the landscape. Description and interpretation of these various features, most of them originally constructed in 1831 but modified later in the 19th century, can be developed with the assistance of 19th- and early 20th-century documentation, notably the Morris Canal and Banking Company surveys of the route of the canal, dating from *circa* 1890, and the surveys produced prior to the dismantling of the canal in 1927.[12] Several late 19th- and early 20th-century photographs showing the canal within the village are also informative in this regard (note: the canal features at Waterloo are already listed on the National Register as contributing elements of the Morris Canal Historic District).

The canal prism is still watered and the towpath is still intact on the northern bank of the river where the waterway enters the village from the west (Image No. 0024). This section of the canal ends at the Smith Store, where canal boats would have entered a guard lock to safely transfer them into the slack water section of the river created by the still-extant canal-era dam. This lock, known as Lock 3 West, is unique among the locks on the Morris Canal in that its western section consists of a timber aqueduct that carries the lock over the pre-existing tailrace of the village's mills, while its eastern section is a more typical masonry lock. Most of the timber aqueduct is now missing, but evidence of its westernmost foundation still likely exists below the ground surface. The eastern, masonry end of the lock is largely intact and, according to an archeologist who examined it in the early 1980s, should still be in excellent condition with timber gates surviving below the waterline.[13] A timber bridge set on masonry abutments spanned the lock at this site and it is likely that the abutments from this bridge were used to partially fill the lock when it was dismantled.

The canal dam across the Musconetcong River is located just to the southeast of the guard lock. This dam, in conjunction with an embankment that extends from the lock eastwards along the north bank of the river, was built to create an impoundment that enabled boats to cross the river and enter the lock, and also allowed for the capture of water that could be used in the canal further to the west. The dam is a masonry structure with some timber elements and it was designed to let water flow over its entire length. A timber and iron gate is located within a masonry channel at the southern end of the structure. A timber bridge set on timber cribbing piers spanned the river above the dam and allowed the passage of mules and tenders along with the boats. There is a possibility that the remains of a canal boat exist within the river upstream of the Stanhope-Waterloo Road crossing adjacent to the base of the no-longer-extant ore chutes of the Sussex Railroad. Two sources claim to have observed the bottom section of a canal

[12] Vermeule, Cornelius C., Jr., Dismantling Drawings of the Morris Canal, Drawing Sheets 257-260, 1927. On file, New Jersey State Archives, Trenton, New Jersey.
[13] Brian Morrell, e-mail communication with Hunter Research, Inc., March 25, 2013.

boat at this location in recent years.[14]

The inclined plane, Plane 4 West, (Image No. 0016) extends southward from within the river up the steep slope on the Morris County side of the Musconetcong Valley. The plane was finished in 1831 at which time it was powered by a 30-foot-diameter timber water wheel. This design was extensively modified around 1850 to incorporate a water-powered, Scotch reaction turbine as its power source. At the top of the inclined plane the canal prism and associated towpath appear again and continue onward to the eastern limit of the historic district where it is cut by the Route I-80 corridor. The plane, which is still readily apparent in the landscape, is approximately 1,000 feet long with a central plane bed that is 34 feet wide. Several critical components of the plane still survive at Waterloo, including sleeper stones and rails, sheave wheel bases, retaining walls, mule path, the return wheel pit, the cable pass-through at the top of the plane and, at the base of the plane, a large iron bullwheel with a portion of wire rope, reportedly still in place within the Musconetcong River. Additional sections of iron wire rope are visible in loops amongst a pile of masonry at the top of the plane near the tar melting pot, hearth, and a small shed that is noted on the dismantling plans. Unfortunately many other iron components of the inclined plane, notably the rails and sheave wheels, have been scavenged for scrap iron. Various elements of the plane extend off from this central trunk, including the headrace, for which masonry piers are still extant, that carried the canal's water to the powerhouse (Image No. 0017) and a waste way that provided a bypass for the water around the powerhouse. This latter channel is visible as a substantial curving ditch and embankment. Culverts carried the waste way under the Sussex Railroad and still survive built into the railroad embankment.

A large, partially filled masonry turbine chamber (Image No. 0018) around 30 feet deep exists at the powerhouse site. The adjacent penstock, a 5-foot diameter cast-iron pipe that extends vertically into the ground and into the turbine chamber, is not visible on the ground surface but likely exists within a large depression visible on the surface. The top of the penstock pipe and cast-iron elements of the water-powered turbine may have been removed for scrap after the canal was dismantled. No trace remains today of the tall, roughly 20-foot-square timber powerhouse that stood above the turbine chamber or of the winding drum and its mount. The tailrace from the turbine chamber is not visible from the surface and its outlet is buried under debris deposited during the construction of Route I-80. It is likely that the tailrace survives, at least in part, under the railroad embankment and fill. The stone-lined channel that carried the combined waste channel and tailrace waters is visible crossing under the abandoned Waterloo-Hackettstown Road and between this road and the river.

The foundations of the plane tender's house survive at the top of the plane (Image No. 0019). The masonry remains of this building measure roughly 33 feet long by 14 feet wide. The house may have been built in two episodes with separate bulkhead entrances giving access into two different basement sections. A seam is visible on the exterior of this building in early 20th-century photographs, which perhaps support this assertion. The presence of a fireplace support in the southern section of the foundation suggests that this end of the building may have formed the original plane tender's house, built *circa* 1830, as these buildings were typically built with fireplaces. The northern section of the basement, which is smaller and has no fireplace support, was perhaps built when the inclined plane was upgraded around 1850. The new addition, likely heated by a cast-iron wood stove, would have housed the newly needed brakeman, who rode the cradle cars that carried the canal boats on the inclined plane. Two rectangular stone privies extending approximately five feet below the ground surface are present just north of the house foundation. The ground around the house appears relatively undisturbed.

[14] Kalata Papers, Canal Society of New Jersey, Note, September 12, 1941; William McKelvey, personal communication, March 15, 2013.

Main Elements of the Morris Canal (S-1/M-1) within Waterloo Village Historic District:

- Prism and towpath – west of guard lock and east of inclined plane
- Guard Lock 3 West
- Towpath bridge
- Canal company dam and embankment along river
- Possible boat within Musconetcong River
- Inclined Plane 4 West - composite feature includes the following:
  - Plane bed and retaining walls
  - Sleeper stones
  - Headgate, headrace, and headrace piers
  - Bullwheel in river bottom
  - Pit for cable return wheels and cable pass through
  - Powerhouse site/penstock/turbine Chamber
  - Bypass/waste channel
  - Tailrace (road bridge over tailrace)
  - Tar melting pot and hearth
  - Wire rope sections
  - Plane tender's house foundation and privies
  - Archeological potential for earlier inclined plane wheel pit
- Concrete drainage pipes associated with the 1927 canal dismantlement

Sussex Railroad (M-10) and Related Archeological Sites

The massive earthen embankment that carried the Sussex Railroad through the Waterloo Village Historic District is still a major landscape feature on the south side of the Musconetcong Valley (Image No. 0020). In stark contrast, very little survives of its predecessor, the Sussex Mine Railroad, completed in 1850, which carried mule-pulled ore cars along the Sussex County side of the valley from the Andover mines down to Waterloo for loading on to canal boats. The exact route of this earlier railroad is unclear and the only plan showing the short-lived railroad spur is of dubious scale. The presence of stone armoring along the canal bank opposite an opening in the bluff between the church and the Nathan Smith House may be the best evidence of its location. There is also a barely visible curving landscape feature visible on LIDAR plans of the historic district boundary that also suggest this same alignment (Figure No. 6).[15]

By 1854 the Sussex Mine Railroad through the village had been removed and the renamed Sussex Railroad, which also carried passenger traffic to Andover and eventually points beyond, had been built in its place. The principal features of the Sussex Railroad, within the historic district, were a bridge over the Musconetcong River supported by stone abutments, an embankment across the floodplain and a long, gradually rising rail bed that climbed the Morris County hillside, spanned both the inclined plane and Stanhope-Waterloo Road, and continued on to meet the Morris & Essex Railroad at Waterloo Station on Waterloo Valley Road, outside the district on the opposite side of Route I-80. In order to ascend from the Musconetcong valley floor to the Morris & Essex, large earthen embankments were created with earth quarried from the adjacent hills and substantial masonry bridge abutments were built to carry the

[15] Light Detection and Ranging (LIDAR) statewide map coverage, New Jersey Historic Preservation (NJDEP)

railroad over the inclined plane and Stanhope-Waterloo Road. The abutments for the bridge over the inclined plane are still in excellent condition, but the abutments for the bridge over the road are no longer in place, the masonry having been removed and reportedly used for construction purposes elsewhere within the village. While no rails are present, the railroad bed (Image No. 0021) is level in section and continuous with no apparent breaks.

A railroad siding served a series of ore chutes positioned along the south bank of the Musconetcong River. These replaced the canal-side ore dock of the Sussex Mine Railroad and were in place by September 1854, when a train carrying ore made a trip to unload at Waterloo before the canal closed for the winter.[16] The only photograph showing the siding is a view from *circa* 1900 looking across the river from the siding's tracks, which are just visible at the bottom of the image, but the former existence of the ore docks is evidenced by an approximately 4-foot high stone retaining wall that runs along the riverbank for approximately 75 feet at the western end of the siding. Long, partially buried timbers can still be seen along the banks of the river at this location and, according to some oral sources, additional timbering can be seen within the river channel at low water. Large timber chutes or boxes would have been loaded at the top from ore cars and emptied into canal boats tied up at the bottom. The boats would then be pulled through the slack water section of the river under the road bridge back into the canal at the guard lock. The siding is visible on the ground along with a cast-iron frog for switching the tracks and directing ore cars to the chutes.

In 1901, when the Stanhope cut-off of the Sussex Railroad was built, trains no longer traveled across the inclined plane and over the road to Waterloo Station. The railroad was likely dismantled at this time. A siding was maintained into the historic district to service the Waterloo Ice Company's ice house until 1917, when this latter concern finally went out of business. A small shed is shown along the railroad where the spur for the ice company siding split from the main track. This shed was likely a shelter for a switchman. At the far eastern end of the historic district, the well preserved stone abutments of the Sussex Railroad crossing of the Musconetcong River still survive just south of Waterloo Road.

Main Elements of the Sussex Railroad (M-10) in Waterloo Village Historic District:

- Rail bed, siding and embankment
- Construction material quarries
- Cast-iron rail frog
- Site of timber ore chutes
- Three bridge abutments (Stanhope-Waterloo Road, inclined plane, Musconetcong River)
- Shed site near ice company siding
- Ice company siding
- Contours for mule railroad in village
- Armoring in canal at Sussex Mine Railroad ore dock

Waterloo Ice Company (M-12) and Related Archeological Sites

The construction of the Waterloo Ice Company facilities just east of Waterloo Village in the late 1880s had a profound effect on the setting of the valley (Figure No 7). The company, founded by Samuel Smith, Peter Smith and Seymour Smith, dammed the Musconetcong River at the point where the river narrows just upstream of the village

[16] Lowenthal, Larry, and William T. Greenberg, Jr., *The Lackawanna Railroad in Northwest New Jersey* (The Tri-State Railway Society, Inc., Morristown, New Jersey, 1987), pp. 129-139.

core. This dam, which is still visible today, appears to be of earthen construction armored with substantial masonry. A masonry and concrete spillway was built in the center of the dam to allow passage of the majority of the river's flow and a head race intake was built at the northern end of this dam to maintain supply to the mills. The head gate for this race was probably located approximately 200 feet downstream of the dam at the current location of a concrete structure built in 1919. The dam created a larger impoundment (approximately 50 acres) than had previously existed upstream of the village. The plan was to create an area of calm water adjacent to the ice houses that could freeze evenly and be cut without worrying about the current of the river. To accomplish this end a bypass channel was excavated along the northern bank of the river to keep the flow of the river from interfering with the ice company's operations on the southern bank. This channel extends from the northeast corner of the ice ponds, where it is visible as a straight channel running along the northern edge of the floodplain, and cuts off the spit of land on which the reconstructed Lenape Village is situated. The channel then empties into the northwestern end of the ice pond. Its total length is approximately 1,800 feet.

The ice harvesting operation on the southern bank of the river consisted of five ice houses lined up along the lake shore, ice elevators, at least two different engine houses, an outhouse, a company office and dwelling, and three railroad sidings that serviced the facility. Other ancillary structures may have existed but are not visible in photographs of the area. The ice houses appear to have been timber buildings that covered an area measuring 150 by 200 feet and had a capacity of 30,000 tons of ice. The concrete foundations of these buildings are still present (Image No. 0022), surrounded by channels which allowed water to drain away from the gradually melting ice. Concrete block pier foundations still survive indicating the location of the elevators servicing the ice houses. Historic photographs show two different engine house configurations. An earlier photograph shows a white, two-story, frame engine house with a tall smokestack, situated between the second and third ice houses (from the east) and the ice pond. A later photograph shows a frame, single story engine house with smokestack and tower located to the northeast of the ice houses (these do not appear in the earlier image). A brick engine mount with protruding iron anchor bolts is still present at the location of the second engine house. A privy hole for an outhouse also survives near this feature.

Records of the Sussex Railroad held at Steamtown National Historic Site include railroad field books dating from the late 1880s. A map of the railroad in the Waterloo area surveyed on August 14, 1888 shows a series of three railroad sidings branching off from the main line and providing access to the Waterloo Ice Company plant.[17] Two sidings ran along the north side of the ice houses (one passing alongside what is probably the original engine house; the other lying adjacent to the ice house buildings). A third siding passed along the south side of the ice houses. An historic photograph from the same period clearly shows a rail car on a siding north of the ice houses along with the first engine house. These sidings would not only have delivered coal to the engine house and sawdust for packing the ice, but would also have been used to transport ice blocks to market. LIDAR imagery of the site and field observations both generally confirm the existence and alignment of these sidings.

The company office and residence is a 60-by-25-foot, five-bay building made largely of blocks of mortared terracotta flume, arranged horizontally. Although the roof is completely missing, the eastern facade and gable ends of the building survive to their full height (Image No. 0023). A tree has recently fallen through the western facade collapsing its central section. There are large window openings on all sides of the building, one of which still has wood trim. Door openings are visible at either end of the building and a molded concrete block, single-story addition is attached at the northern end. This building is not visible on any photographs of the site and its date of construction is unclear. A similarly constructed building, sheathed in tile, was built *circa* 1914 for the supervisor of the Mountain Ice

[17] Sussex Railroad Field Books, p. 47, August 14, 1888. Manuscripts on file, Steamtown National Historic Site, Scranton, Pennsylvania.

Company approximately five miles away in Landing, New Jersey. The office/residence at Waterloo would only have been used for a very short period; by 1917 the ice houses had ceased operation.

Main Elements of Waterloo Ice Company Facility (M-12) in the Waterloo Village Historic District:

- Ice pond dam, spillway and headrace
- Ice house foundations
- Company office and residence ruin
- Powerhouse sites and engine mount
- Privy
- Ice elevator piers
- Railroad sidings
- Bypass channel

Waterloo Village

The 19th-century village of Waterloo remains largely intact, having grown up around the core of the 18th-century settlement and its industrial core. The coming of the Morris Canal breathed new life into the village. A large stone store was built in 1831 on the banks of the Morris Canal just west of the guard lock, the coal house was rebuilt as a gristmill and a sawmill built on the site of the forge. The building of the canal necessitated the relocation of the 18th-century gristmill and sawmill, which required extensive reconfiguration of the hydropower system on the north bank of the river. Substantial archeological elements of the 19th-century mills and their waterpower systems (and other canal-side shops and buildings) are anticipated in amongst and on top of the earlier 18th-century industrial remains in the area between the 19th-century gristmill and sawmill and the storehouse. Other remains are projected to survive upstream of the 19th-century gristmill and sawmill, along the riverbank, where they are less likely to be interwoven with earlier remains from the forge era.

Three new homes (from west to east: the Nathan Smith House, Worker House 1 and Worker House 2) were added to the village in the first half of the 19th century, as well as several associated barns, carriage houses and other farm buildings. The village continued to grow in the second half of the century with a Methodist Church in place at the western end of the village by 1860, followed by the "Canal Museum" residence and "Administration Building" residence (1860s), the Seymour R. Smith House (*circa* 1878) and the Peter D. Smith House (*circa* 1871). All of these buildings and the three 18th-century homes continued to be occupied into the 20th century.

Across the river, situated immediately adjacent to the Waterloo-Hackettstown Road is the Poyer House (M-34). This three-bay, two-story frame house has a similar layout to the Canal Museum residence and was built to be heated with stoves. Several shaft features, including the upper sections of a well and a probable privy, are visible on the ground surface behind the building, as are the collapsed remains of a shed. The remnants of a small stone building, measuring approximately 14 by 18.5 feet, are visible to the rear and downslope of the Poyer House, perched on the bank of the river. The function of this building is uncertain, but its small size, mortared fieldstone construction, lack of fireplaces or chimneys, and proximity to the river all suggest that is more likely an outbuilding than a dwelling.

The village's long period of occupation and use, and the limited modern modification of most of the houses and their surrounding landscape, imply strongly that significant archeological deposits are likely to survive in association with the buildings. Areas immediately in front of and for some distance behind and to the sides of the buildings may

contain subsurface remains of structures long since destroyed and scatters and/or middens of historic artifacts reflecting life within the village. In addition, the sites of several large outbuildings and barns located to the rear of the houses are likely to hold archeological potential relating specifically to their use.

Natural and Cultural Disturbance and Site Integrity

Much of the history and archeology of Waterloo Village and its predecessor Andover Forge revolves around the Musconetcong River and its role as a source of water power and transportation conduit. The village and forge location also occupies a critical point in the landscape where the river could be both dammed and bridged. While periodic flooding and river erosion have depleted cultural features over the years, it is nevertheless apparent that important archeological resources lie submerged below the waters of the Musconetcong and buried beneath the sediment of the floodplain. Mid- to late 20th-century reports that remains of the base of the inclined plane and at least one boat survive in the river are credible, and there is a strong likelihood that traces of the 18th- and mid-19th-century hydropower systems and earlier bridges may also be found intact. In particular, parts of the dams and headrace intakes associated with the 18th-century forge, gristmill and sawmill and with the mid-19th-century gristmill and sawmill, all key to understanding the evolution of the industrial history of the site, are suspected to lie beneath the present-day waters of the Musconetcong. There is also likely to be strong archeological expression within the river, not only of the Morris Canal crossing between the guard lock and inclined plane and of the Waterloo Ice Company dam, but also of the historic road crossing adjacent to the forge (and later sawmill) site.

On the Sussex County riverbank between the river and Waterloo Village Road is an extraordinarily rich zone (S-15) of industrial archeological potential, especially between the general store and the reconstructed sawmill. Within this zone are projected to lie the remains of the industrial core of 18th-century Andover Forge (the forge itself, the original gristmill and sawmill, the blacksmith shop/magazine and wheelwright shop, raceways and flumes, etc.) buried beneath the canal-era structures and fill, which in themselves hold valuable archeological information. This assessment of high archeological sensitivity is based on a combination of documentary evidence, current landscape and building analysis, and archeological observations at the guard lock and reconstructed sawmill. Although the canal-era construction certainly took its toll on the 18th-century industrial features, it does appear that substantial filling took place in this area which will have served to bury and preserve earlier foundations and site elements that were not physically removed. Extending upstream from the reconstructed sawmill and coal house/gristmill to the Waterloo Ice Company dam, the riverbank below Waterloo Village Road displays ample surface evidence of archeological features believed to relate to hydropower modifications for the mid-19th-century gristmill and sawmill and the ice-making operations. Downstream from the general store, the Morris Canal is the key archeological resource, but the potential also exists for remains of the canal-side terminus of the Sussex Mine Railroad.

In terms of cultural disturbances in the industrial zone between the river and Waterloo Village Road, there have been utility installations and construction of pathways and pedestrian bridges in the later 20th century, but these actions are likely to have had only a minimal and localized impact on the site as a whole where deposits and features of interest may extend to depths of eight to 10 feet or more. However, one unfortunate and major episode of disturbance occurred as recently as 1980-81 as a result of the reconstruction of the sawmill. From anecdotal information it would appear that a valuable opportunity to gather information about the forge was lost during this reconstruction project. The integrity of the forge site was undoubtedly compromised by this work, but this location is still not without archeological value, especially since it appears that successive sawmills may have re-used portions of the forge foundations.

North of Waterloo Village Road, from the Methodist church to the Canal Museum, there is a broad zone of potential

archeological interest that extends back for up to 300 feet from the road frontage. The ground surrounding each of the historic buildings in this zone, and most especially the three 18th-century stone dwellings, may be considered archeologically sensitive. The side and rear yards, in particular, are likely to contain domestic deposits, shaft features (wells, privies, cisterns, pits) and structural remains of outbuildings that can provide information important to our understanding of the land use history and lifeways of Andover Forge and Waterloo. In addition, there are documentary references to several other buildings no longer standing, which archeological exploration may encounter. Sporadic 20th-century actions (e.g., the moving of buildings, construction of additions, restoration projects, utility installations, gardening) have had some effect on the archeological integrity of this historic residential zone, but as with the industrial archeological resources, these have been localized and have by no means exhausted the archeological value of this area for the future. The extensive building and land modification of the mid- to late 20th century took place mostly to the north and northwest of the historic core of Andover Forge and Waterloo, away from the main zone of archeological interest. This activity may, however, have removed traces of the original mule-drawn Sussex Mine Railroad of the early 1850s.

On the Morris County side of the Musconetcong only two standing buildings remain the Poyer House and the shell of the unusual terracotta residence at the Waterloo Ice Company complex. The surface remains of industrial, transportation and domestic features and the related potential for archeological data are exceptional in their quality, state of preservation and integrity. Of paramount importance are the inclined plane, its associated water-powered engineering elements and the plane tender's house site, which together comprise one of the best preserved and most potentially informative nodes along the entire Morris Canal route. Of the 23 inclined planes on the canal, the Waterloo example is the most complete, with its plane bed, powerhouse site, headrace, tailrace and bypass channel all clearly visible in the landscape and hinting strongly at the existence of buried fabric. Only the downstream ends of the bypass and tailrace channels, obscured by fill deposited during the construction of Route I-80, have suffered noticeable damage. Similarly well preserved in the landscape are the massive embankments showing the alignment of the Sussex Railroad and its spurs to the ore docks and Waterloo Ice Company facility on the riverbank, and the abutments for the railroad crossing of the inclined plane. Only the abutments for the railroad crossing of the road leading down the hillside to Waterloo have suffered loss of integrity. The Waterloo Ice Company plant retains a strong surface expression. In addition to the ruinous terracotta residence, the footprints of the ice houses and the engine mounts in the power house are largely intact. Across the river and around the northern periphery of the ice pond are traces of a substantial manmade channel designed to assist in the control of water for ice-making purposes.

Aside from the ice company residence and the plane tender's house near the summit of the plane, the main focus of domestic activity on the Morris County side of the river is downstream of the historic road and bridge crossing between the river and the road leading to the Waterloo railroad station on the Delaware Lackawanna and Western Railroad. The area surrounding the mid-19th-century Poyer House (M-34) has archeological potential, as indicated by surface evidence of shaft features and undisturbed ground in the rear yard. The stone foundations of a small structure of uncertain function and age, close to the riverbank behind the Poyer House, require careful archeological analysis, and other outbuildings may have left below-ground archeological traces on this property. Somewhere in this general vicinity, most likely closer to the bridge crossing, may survive the 18th-century site of "the House over the River." Subsequent to the 19th-century land use and construction activities, there has been minimal ground disturbance except for the building of the interstate. The slow deterioration of the abandoned built environment and gradual reclaiming of the land by natural reforestation has resulted in the creation of an unusually pristine archeological landscape with a powerful surface and potentially rich subsurface expression.

Archeological Investigations

No major or extended program of formal archeological excavation has taken place at Waterloo Village, although glimpses of the rich below-ground potential in the core of the settlement have been obtained through occasional observation and subsurface testing. In 1980-81, during reconstruction of the sawmill, quantities of ironworking waste and foundations, were observed by Kevin Wright, an interpreter on staff at the Village. These finds, never formally reported, appear to confirm that the ironworking facility for which Andover Forge was named was located in this spot. Forge waste can still be seen on the ground surface around the reconstructed sawmill.

In 1990, a brief archeological project funded through the New Jersey Historic Trust investigated the lock and inclined plane. Arrangements were made for the sluice gates to be opened in the canal company dam and the Musconetcong River was lowered some 5 to 6 feet during this investigation. The guard lock was dewatered except for some seepage entering in the silt in the lock chamber and a backhoe was used to excavate down to the bottom of the lock which was reached at about 12 feet below the tops of the lock walls. Below the silt line the lock walls were plumb and retained intact, solid mortar pointing, while the lock floor was "felt" through probing. Many large stones had been dumped into the lock from the bridge abutments that formerly carried a bridge over the lock. The miter gates still remained in place at the river end of the lock but were rotted away above the silt line in the lock. Timbers were also noted in the bottom of the mill tailrace at the aqueduct end of the lock (these may have been either sills that supported the bottom of the timber aqueduct portion of the lock or the bottom of the aqueduct itself). The tailrace and the adjacent river are very silted up in this area, much more than would have been the case during the canal period. A brief excavation on the Smith Store side of the tailrace revealed extensive remains of the aqueduct, implying that at least the bottom half of the aqueduct still remains intact below the ground. In the river bottom the sheave wheel was visible at the bottom of the inclined plane. Cable was still wrapped around the wheel and the wheel itself was set in a masonry pocket which appeared to be lined on the inside with vertical planking. No silt covered the sheave wheel which with the river lowered was still covered with about three feet of water. The sheave wheel, which had a metal bearing support on top, appeared identical to the one documented at the Boonton inclined plane by Vermeule at the time of the canal's dismantling. Although field documentation was generated at the time of this investigation, this study unfortunately was not formally reported on at the time.[18]

Elsewhere in the village, several other minor archeological surveys were conducted in the mid-1980s in connection with site improvements implemented by the Waterloo Foundation and the State of New Jersey. These investigations mostly took place on the fringe of the village in areas that were historically agricultural land. No significant archeological remains were found.[19] In 1989, archeological testing was conducted along projected water lines and on the site of a water holding tank, closer to the historic core, in the eastern end of the village. Although this work included shovel testing in the rear yards of two 19th-century buildings, the Peter D. Smith House and the Canal

[18] Brian Morrell, e-mail communication with Hunter Research, Inc., March 25, 2013.

[19] Lenik, Edward J., "Archaeological Monitoring of Percolation Test Excavations, Comfort Station Project P.435, Waterloo Village, Allamuchy Mountain State Park," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1984; Kraft, Herbert C., "Archaeological/Historical Cultural Resources Survey of the Proposed Construction Site in Waterloo Village, Byram Township, Sussex County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1985; Kraft, Herbert C., "Archaeological/Historical Cultural Resources Survey of the Slit Trench and Proposed Ticket Booth Construction Site in Waterloo Village, Byram Township, Sussex County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1986; Kraft, Herbert C., "Archaeological/Historical Cultural Resources Survey of the Proposed Gatehouse Construction Site in Waterloo Village, Byram Township, Sussex County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1987; Kraft, Herbert C., "Archaeological/Historical Cultural Resources Survey of the Proposed Orientation Center Construction Site, Waterloo Village, Byram Township, Sussex County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1987.

Museum, no significant Native American or historic finds were made.[20]

Finally, in 1989, archeological surveys were performed in connection with the creation of the reconstructed Late Woodland Lenape Indian village on the "island" northeast of Waterloo Village on the edge of Waterloo Lake. Reported as the site of a historic cemetery containing burials of early inhabitants of Andover Forge and Byram Township, no archeological remains of burials or other historic period land use was found. Oral sources, however, claim that up to 50 graves once occupied this landform, many of which were opened in the early 20th century; there remains some possibility that burials may yet be found here.[21]

[20] Kraft, Herbert C., "Archaeological/Historical Cultural Resources Survey of the Area Proposed for the Location of the Water Holding Tank and Water Lines, Waterloo Village, Byram Township, Sussex County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1989.
[21] Wright, "Fact and Fiction about County's Heritage," 1986; Wright, "Waterloo, Part 4: Buying Time," 2012.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Waterloo Village (Boundary Increase #1)
Name of Property
Sussex County, New Jersey
County and State
Name of multiple listing (if applicable)

Section number 8 Page 1

Summary Paragraph

Waterloo Village was a pivotal industrial and trade town including an active farming site. It was a witness to and participant in the American Revolution, and the village and its residents had an active role in the industrial expansion of New Jersey in the 19th century. The site is significant for its association with the development of New Jersey from the mid-18th century through to the early-20th century, as established under Criterion A. The architecture within the village is varied, and reflects stylistic and vernacular trends, which coincide with national trends, and the periods of growth and prosperity at the village, as established under Criterion C. The site as a whole is significant because it has yielded and is likely to yield information important in history under Criterion D. Archeological data recovered from the district will reflect the district's full period of significance from 1760 up until 1930, extending and strengthening its importance at both ends of this time range. Based on these three criteria, the period of significance for Waterloo Village is the time of initial development, c. 1760, to c. 1924, the period when the most prolific use of the village virtually ended.

Brief History of Mount Olive and Byram Townships

The land including the present Byram Township and Waterloo Village on the Sussex County side of the village was originally part of New Town (now Newton), one of the first of four townships created at the formation of Sussex County from Morris County in 1753.[1] Sussex County was created in near equal parts from both East and West Jersey. [2] The population of Sussex County grew in the middle and later years of the 18th century and these larger townships were then divided into smaller townships including Byram Township, which was created from New Town in 1798. The earliest history of Byram Township centers on the iron industry and mining. Within the Township's boundaries, a number of forges and furnaces were active, including at Old Andover (Waterloo), Lockwood, Roseville and others, and the underlying earth was filled with iron ore deposits suitable for production. Its iron deposits helped to spur its growth and development throughout the 18th and 19th centuries, with agricultural pursuits within the township being secondary. One of the largest mines in the region was the Roseville Mine, first activated in the 1850s. The iron mine and production facility that had the greatest impact on the development of the Waterloo section of Byram Township was the Andover Mine. Although the mine and furnace were in Andover, the Andover Forge was located at what is currently referred to as Waterloo. Since the Andover mine played such a large part in the history of Byram Township before the Revolution, [3] the role of mining at Andover, specifically the Andover Iron Works, is discussed in the context of the development of Waterloo.

The area that is Mount Olive Township today, in which part of Waterloo Village is located, was first part of Roxbury Township, which was incorporated as the fourth township in Morris County in 1740.[4] The geological formation of Mount Olive Township accounts for its historic and economic development.[5] Mount Olive is situated on the peak of iron-rich Schooley's Mountain. In the mid-18th century, iron ore was discovered in the mountains, and similar to Byram Township, iron mines and forges began emerging. Industry soon followed, attracted by the significant amount of iron ore found and the considerable amount of water power supplied by the area's streams and rivers.

Andover Iron Works

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[1] James P. Snell, *History of Sussex and Warren Counties, New Jersey, With Illustrations and Biographical Sketches of Its Prominent Men and Pioneers* (Philadelphia: Everts & Peck, 1881), 149.

[2] Snell, 149.

[3] Cindy Lee, *Images of America: Waterloo and Byram Township* (Charleston, SC: Arcadia Publishing, 1997), 7.

[4] RoxburyNewJersey.Com, "A Short History of Roxbury Township, Morris County, New Jersey", Internet, http://www.roxburynewjersey.com/history.htm, Accessed 27 July 2010.

[5] Acroterion Historic Preservation Consultants, 1.

Andover Township, which was part of the southern subdivision of Sussex County, was established in 1864 as one of the towns created from New Town. Its current geographic region is composed of approximately 1.5 square miles but during the 18th and part of the 19th century was composed of approximately 20 square miles. Andover is part of the land grant acquired from Lord Carteret and others and by William Penn and others for West New Jersey in 1680. In the late 1750s and early 1760s, Chief Justice William Allen (1704-1780) of Pennsylvania and Joseph Turner, also of Pennsylvania, acquired approximately eleven thousand acres along the branch of the Pequest River within Andover, which included present-day Waterloo Village. From at least the mid-1730s through the Revolutionary War, Allen & Turner was a Philadelphia-based merchant company heavily involved in the exploration, mining and processing of metalliferous ores and in the trading of iron and copper ores, pig iron, bar iron and iron bar in eastern Pennsylvania and northern New Jersey. In the early 1740s, they established the Union Iron Works in High Bridge (present-day Norton in Union Township, Hunterdon County). At the Union Iron Works, Allen & Turner operated a blast furnace, forge and slitting mill. Allen & Turner's business at that time was undertaken within the context of the British mercantile system and the Iron Acts of 1750 and earlier, which sought to maximize British imports of American metal ores, pig-iron and bar iron for the benefit of the British metalworking industry and to restrict the development of late-stage metalworking facilities in the American colonies (plating, rolling and slitting mills, naileries, steel furnaces, etc.) in order to limit competition with British industry.

Between 1758 and 1759, John Hackett made multiple land acquisitions on behalf of Allen & Turner in both Morris and Sussex Counties (in both East and West Jersey) from John Reading, Hackett's father-in-law, and others in the area of the Andover Furnace and Forge. The acquisitions totaled thousands of acres[6] and by 1760 Allen & Turner established the Andover Iron Works. The owner composition was 5/16th ownership to William Allen, 5/16th ownership to Joseph Turner, 4/16th to Lynford Lardner, and 2/16th to John Hackett.[7] Lynford Lardner (1715-74) was also a merchant who emigrated to Pennsylvania in 1740. He served as a member of the Pennsylvania Provincial Council from 1755 and was made Comptroller of Customs in 1771. John Hackett (died 1766) acted as the agent for the Andover Iron Works buying land for the mining and ironworking operations. He also managed the Union Iron Works for several years before focusing on the Andover Iron Works; he, or his son, Samuel, gave their name to "Hackettstown."

The Andover Iron Works was composed of the mines, Andover Furnace, Andover Forge and vast tracts of surrounding acreage, which was mostly woodland managed to supply charcoal for the furnace and forge. The Andover location was remote, undeveloped and very lightly settled in 1760 and essentially was the frontier. From the standpoint of West Jersey land rights, the Andover Forge, which was located at present-day Waterloo, was regarded as lying at the eastern end of a 681-acre tract acquired by John Hackett from his father-in-law John Reading; from the East Jersey standpoint, it was on a 92-acre tract taken up by Hackett from the London Company. Based on land records, on May 21, 1760, John Hackett received £990 from the Andover Iron Works company for 660 acres that he

[6] According to the *State Geologist Report* published in 1910, the Andover mine, located approximately 1.5 miles north-northeast of present-day Andover, contained the most extensive deposit of hematite iron ore in the state; this mine contained both magnetite and hematite, but the hematite appears to have been the more extensively mined of the two. According to the State Geologist, "The magnetite, which was associated with the hematite, often contained a large percentage of manganese, and consequently the iron made from the mixed ores was highly manganiferous. Analyses of specimens of the pig from the old Andover charcoal furnace and the anthracite furnace at Phillipsburg testify to this fact, and account for the excellent reputation borne by the Andover ore in the early days." (William S. Bayley, *Iron Mines and Mining in New Jersey: Vol. VII of the Final Report Series of the State Geologist* (Trenton, NJ: MacCrellish & Quigley, 1910))

[7] Chew Family Papers, New Jersey Land Papers, Series 21, folder 17 available at the Historical Society of Pennsylvania (HSP).

had bought from John Reading,[8] which was to be the location of the forge. By October 1760, the furnace was in operation[9], but it was not until October 1761 that the forge was in operation. In reference to the forge, a letter to John Allen (William Allen's son) written probably from Joseph Turner to Allen in England, "… your father tells me he has wrote you about the two Tunn of Barr Iron Sent by Budden which was made at Andover Works & desired you to make an exact enquiry of every workman it may be put with to make a thorough tryall of itt & Learn the Caracters of each these workmen that wee may have a fair & just account of its quality, for from Rush & Several others we have Account of its being the best they ever used…"[10] A second letter written on October 21, 1761, again from Turner to John Allen, references John Hackett as "…concerned with us in the new furnace & forge up at the new place Called Andover …."[11] Hackett, at that time, was splitting his time between the Union Iron Works and the Andover Iron Works, but the plan appears to have been to hire someone new to run Union, so that Hackett could concentrate on Andover.

The Andover pig iron and bar iron were sold extensively by brand name in places like Elizabeth and New York as well as exported.[12] Based on a description found in a 1782 lease agreement, the forge lay close to the water's edge on the north (Sussex County) side of the Musconetcong River. The forge utilized the power from the river which was damned at this location, and had a 70-foot long head race, which provided waterpower to the forge. The forge was surrounded by flumes on three of its four sides, and the forge contained four hearths (two finery and two chafery hearths), each with a bellows powered by a waterwheel and two trip hammers, also powered by waterwheels.[13] The site at Andover Forge also included other support structures and residential buildings as detailed in this lease agreement and various advertisements leasing the property in the later years of the 18th century. A coal house or charcoal house was located to the north of the forge site, and based on its dimensions, is more than likely the present-day grist mill. There was also a bridge to the south of the forge that crossed the river to the Morris County side, which would have been used for its abundance of wooded lands. Grist and saw mills were also present on site, a distance west of the forge, and were served by a single flume. Other buildings and structures included a wheelwright shop, a blacksmith shop and magazine, and stables. There were at least three principal dwellings (present-day Homestead, the Waterloo Hotel and the Samuel T. Smith House), other barns and outbuildings, and dwellings for the forgemen and slaves. There was also a house on the Morris County side of the river in the approximate location of Inclined Plane 4 West.[14] Each of the three primary residences appears to have been constructed in two phases and may originally have been constructed to house two families. The architecture at each reflects the architecture of the mid-to-late 18th century in both plan and elevation, as well as at the architectural detailing of windows, doors, and other features. The two construction periods appear to have occurred within a short time of one another and may reflect steady growth at the Andover Forge in the mid-18th century.

Although the operations at Andover were apparently extensive, operations were not without issues. From

[8] "Account of Lands at & about Andover Iron Works" drawn up by John Hackett on February 6, 1762; witnessed February 26, 1771 before James Parker; recorded February 23, 1774) (WJ Deed AD 550).
[9] Historical Society of Pennsylvania (HSP), Allen & Turner Letterbook, Letter to John Perks, August 20, 1760; Letter to John Griffiths, Jr., September 26, 1760; Letter to David Barclay, October 7, 1760.
[10] HSP, Allen & Turner Letterbook, Letters to John Allen, October 18 and 21, 1761.
[11] HSP, Allen & Turner Letterbook, Letters to John Allen, October 18 and 21, 1761.
[12] Charles Shimer Boyer, *Early Forges and Furnaces in New Jersey* (Philadelphia: University of Pennsylvania Press, 1931), 28.
[13] Indenture (Agreement) between Archibald Stewart and Joseph Turner dated 1782. HSP, Chew Family Papers, New Jersey Land Papers, Series 21, box 768, folder 29.
[14] Indenture (Agreement) between Archibald Stewart and Joseph Turner dated 1782. HSP, Chew Family Papers, New Jersey Land Papers, Series 21, box 768, folder 29.

correspondence written in November 1762, Allen & Turner reported on their visit to Andover in October of that same year and how they were met with "disorder" at the works involving flux and fever, that the water was low in the Musconetcong resulting in low production, and that they were also having difficulty buying up surrounding land for wood fuel.[15] Again in August the following year, Turner reported to Allen who was abroad "… at Andover Forge & Furnace the people were seized with an Intermitting fever & that his great prospect of making a great blast, & a Large quantity of Barr this year was over …."[16] There was also concern about the Indian threat in the Andover area at that time.[17]

John Hackett died in 1766, and at the time of his death, he owed Joseph Turner various debts including various tracts of the Andover Iron Works in Morris and Sussex Counties including a 34-acre tract on the Sussex County side of the Musconetcong "whereon the Forge called and known by the name of Andover Forge stands together with one Grist Mill, Saw Mill and other Buildings & Improvements."[18] In April 1768, Benjamin Chew acquired Hackett's 2/16 interest in the Andover Iron Works. Benjamin Chew (1722-1810) was a fifth-generation American, a lawyer, and a Quaker who held numerous positions in the Pennsylvania and Delaware governments in the colonial period. He also served as Chief Justice of Pennsylvania Supreme Court (1774-77). His second marriage was to Elizabeth Allen, daughter of William Allen.

According to an advertisement in *Pennsylvania Gazette* on October 4, 1770, the Andover Furnace and Forge were to be leased. The advertisement provides a good description of the forge property including other buildings on site and what, at that time, would have been considered amenities worth leasing:

> "To be Lett also, a large FORGE, in excellent Order, with 4 Fires, and 2 Hammers, in the County of Sussex, situate on Muscomiung River, about 7 miles from Andover Furnace, and 35 miles distant from New Brunswick and Elizabeth-town Landings. Five Thousand Acres of well-timbered Land, Part lying in the County of Sussex, and Part in the County of Morris, very convenient to the Forge, will be rented with it; also a Grist-mill, Saw-mill, commodious Houses for a Manager and Forgemen, and 70 Tons of Pig-metal on the Bank, with more than a Sufficiency of Coal to work it up; …The Owners have six Negroe Slaves to hire out or sell, who are good Forgemen, and understand the making and drawing of Iron well…"[19]

In May 1772, Lynford Lardner agreed to sell his shares of the Andover Furnace to Allen, Turner and Chew. In December 1774, there was a public notice in the *Pennsylvania Journal* stating that the owners of the Andover Iron Works intended to petition the New Jersey General Assembly for an act to vest in them legal title to lands purchased by John Hackett. In 1775, they continued their petition, this time to Governor William Franklin, seeking to clarify ownership of the Andover Iron Works, and John Hackett's acquisitions on behalf of the company between 1759 and 1762.[20] In March 1775, the lately deceased Lynford Lardner's ownership of Andover Iron Works was advertized for sale in the *New-York Gazette* and the *Weekly Mercury*.

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[15] HSP, Allen & Turner Letterbook, Letter to Lynford Lardner (via Liverpool), November 13, 1762.
[16] HSP, Allen & Turner Letterbook, Letter to William Allen, August 20, 1763.
[17] HSP, Allen & Turner Letterbook, Letter to William Allen, August 20, 1763.
[18] Morris County deed witnessed July 2, 1768 by Joseph Reed, Jr. before Isaac Smith; Sussex County deed witnessed July 2, 1768 by Archibald Stewart before Isaac Smith.
[19] Boyer, 31.
[20] HSP, Chew Family Papers, New Jersey Land Papers, Series 21, box 769, folder 9.

During the Revolution, Allen and Turner, who were both Loyalists, declined to produce pig iron and bar iron at the Andover Iron Works for the American government. The works were taken over by the American and New Jersey governments in early 1778 but were never formally confiscated possibly due to Benjamin Chew's partial ownership. Benjamin Chew served as the lawyer for the descendents of William Penn, forming the basis of his private practice. He also was a lifelong friend of George Washington and was a friend to John Adams. Although he initially supported the cause of the colonies, he did not support the Declaration of Independence. As a result, he lost many of his government positions, and due to his lack of support as well as his many connections to the Crown, Chew was detained at the Union Iron Works by the Continental Congress from August 1777 to May 1778. Once released, Chew continued to socialize with the George and Martha Washington and after the Revolution returned to public office.[21]

On January 5, 1778 Congress resolved that Colonel Benjamin Flower, Commissary General of Military Stores, engage a contract with Mr. Whitehead Humphreys to make a quantity of steel at Andover Iron Works to support the war effort, and for Col. Flower to apply to the New Jersey government to take possession of the ironworks.[22] On January 15, Col. Flower requested New Jersey "put a proper person in possession of the Andover Iron Work".[23] On February 16, 1778, Governor William Livingston provided the resolution to the New Jersey General Assembly recommending the government do as requested by the Congress.[24] On March 13, 1778, New Jersey's General Assembly resolved that the "Andover Iron Works … [be] put in Blast for the purpose of procuring Iron to be made into Steel it being represented that the Iron made at the said Works is the most proper of any in America for that purpose."[25] It was concluded, however, that the iron works could not be confiscated without due process. It was further resolved, following Benjamin Flower's recommendation, that Colonel John Patton should obtain a lease from the current owners to operate the works.[26] However, in May of that year, correspondence between the Board of War and Governor Livingston indicates that the Board had decided not to pursue having John Patton run the Andover Iron Works, but rather had instructed Col. Flower to apply to the New Jersey Legislature to gain possession of the ironworks for Col. Thomas Maybury. A contract had been settled with Maybury on the condition that proper approvals were provided by Congress.[27]

In June of 1778, Governor Livingston shared with the New Jersey General Assembly details of correspondence from the Board of War showing that Colonel Thomas Maybury should operate the Andover Iron Works and noting that the consent of the owners could not be obtained for a lease. As a result, the New Jersey Legislature empowered a three-man commission to oversee taking possession and operations at Andover Iron Works for three years.[28]

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[21] *Penn Biographies: Benjamin Chew (177 – 1810)*. Available on the Internet: Penn University Archives and Records http://www.archives.upenn.edu/people/1700s/chew_ben.html. Accessed: April 12, 2013.
[22] Pennsylvania Archives, First Series Volume VI, p. 178 quoted in Boyer 1931:28. (Note: unclear if January 5 or 15, 1778 is the correct date of resolution.)
[23] Papers of the Continental Congress, Letters and Reports, 1781-88, from John Pierce, Paymaster General and Commissioner for Army Accounts, and Records Relating to Investigations of Treasury Offices, 1780-81. Papers of Paymaster Pierce, 644. [Declaration of Colonel Benjamin Flower] Available from the Internet: fold3. www.fold3.com/image/#178034. Accessed: March 16, 2013.
[24] Carl E.Prince, and Dennis P. Ryan, Editors, *The Papers of William Livingston, Volume 2, July 1777-December 1778*, (Trenton, NJ: New Jersey Historical Commission, 1979-1988), 222-223
[25] Prince, 222-223.
[26] HSP, Chew Family Papers, New Jersey Land Papers, Series 21, box 769, folder 9; Prince, 227, n. 15.
[27] Correspondence of the Executive of New Jersey, 1776-1786, p. 113 quoted by Boyer 1931:30.
[28] Prince, 358-359.

Between 1778 and 1779, Thomas Maybury and James Morgan served as ironmasters at Andover Furnace and produced large quantities of pig iron for the American military, which were stockpiled at Easton. Production ceased at the end of 1779 because Maybury and Morgan were never fully paid.[29] In 1780 and 1781 there was a surplus of Andover pig iron (left over from the Maybury/Morgan era) and the American military contracted with numerous local forges to have them convert the pig iron to bar iron, and then sought out other contractors to convert the bar iron into steel at steel furnaces in Philadelphia, Trenton and the Schuylkill Valley. Many contracts collapsed over the military's inability to pay cash (payment was usually in the form of pig iron or bar iron). It is unclear how much of a role Andover Forge played in this military system, but it may have contributed some bar iron.

After the war, from 1782 until at least 1795, the forge was leased to a succession of ironmasters. The 1782 Indenture between Archibald Stewart and Joseph Turner provides the greatest detail on the layout and appearance of the Andover Forge after the American Revolution. At the time, the estimated cost of repairs was £610 with the forge costing £230 and the dam £150.[30] Archibald Stewart continued at Andover Forge until 1787 when the property was leased to John Armstrong[31] By this time, Benjamin Chew and his son, also named Benjamin, had taken on much of the responsibility of owner as both Joseph Turner and William Allen were deceased. In 1790, Cadwalader Evans began to lease the forge property, and in October 1795, the Andover Iron Works were advertised for sale or lease in *Dunlap's American Daily Advertiser*.[32] In 1808, the Andover Furnace and Forge tracts were subdivided, permitting for easier sale of both properties. In the early 1800s, John Smith begins to acquire Andover Forge property along with hundreds of acres of property surrounding the forge in both Sussex and Morris Counties.

The decline of forge operations in the late 1790s was due to an inability of American companies to compete with cheaper import metal from Britain which resulted in an overall decline in iron production in New Jersey between the late-18th century and the resurgence of the iron industry in the early-19th century through the discovery and use of anthracite coal, advances in transportation and a growing American economy.

Waterloo[33] Village

A history of Waterloo published in 1915 described the site as "situated between Schooley's Mountain and the Allamuchy Ridge, on the banks of the Musconetcong River, about two miles below its junction with Lubber's Run."[34] Waterloo has experienced many changes through its history, existing first as the site of the Andover Forge and much later as a preserved historic village. While Waterloo began as Andover Forge in the mid-18th century, by the beginning of the 19th century, Andover Forge was no longer in operation.[35] It was at this time that General John

[29] Papers of the Continental Congress, Letters from the Board of War and Ordnance, 1780-81, Volume 1, 67-69. Available from the Internet: fold3. www.fold3.com/image/#223103. Accessed: March 16, 2013.
[30] HSP, Chew Family Papers, New Jersey Land Papers, Series 21, box 768, folder 29.
[31] HSP, Chew Family Papers, New Jersey Land Papers, Series 21, box 768, folder 29.
[32] "Andover Iron Works to be sold, or let on lease". *Dunlap's America Daily Advertiser* (Philadelphia, PA), Tuesday, October 13, 1795. Issue 5150. Page 4. Available from the Internet: www.GenealogyBank.com. Accessed: March 13, 2013.
[33] The origin of the name of Waterloo is in debate. After searching through the summary of articles of the *Sussex Register*, Waterloo was referred to as Old Andover until at least 1838 and by 1842 was referred to as Waterloo.[33] One account notes the name was given by the Delaware, Lackawanna & Western Railroads, but as the history shows, the first railroad to Waterloo was the Sussex Railroad in 1854.[33] Other accounts give credit to General John Smith who may have named it for its proximity to an abundance of water. The exact origins of the name may never be determined but it has clearly been associated with the village since the mid-19th century.
[34] Rev. L.B. McMickle, *History of the Waterloo Methodist Episcopal Church, Waterloo, N.J. 1859-1909*, (Milford, PA: Wm. H. Nicholls, Printer, 1915).
[35] James P. Snell, *History of Sussex and Warren Counties, New Jersey, With Illustrations and Biographical Sketches of Its Prominent Men and*

Smith began to purchase properties at Andover Forge.

According to the *History of Sussex and Warren Counties*, General John Smith, who was a collier (in charge of making the charcoal) at Andover Iron Works, and his brother, Samuel, leased the land around Waterloo Village for farming operations beginning around 1790.[36] Although the accuracy of this statement has not been confirmed, a general history provided in the *Genealogy of the Smith Family of Waterloo, New Jersey* by D. Alden Smith and Robert H. Smith, provides some basic background on General John Smith that may support the above statements.

According to various sources, General John Smith was the eldest son of Ezekiel and Johannah Smith and was born in 1775 in Stirling, New York.[37] John had four brothers, Nathan, Samuel, George and Daniel. His father had settled in Stirling after coming from England in 1770. He married Johannah soon after arriving in America. It is unclear when the family moved to New Jersey, but it appears to have been prior to 1790 as, according to a genealogical history, this was when Nathan moved to Hamburg and the remaining sons settled in the vicinity of Andover.[38] John Smith married Rachel Wollen in 1793 and they settled for a period of time at Schooley's Mountain. John and Rachel had eight children: James (1795), Samuel C. (1798), Joseph (1800), Anna (1801), John (1803), William Oliver (1805), Nathan (1806), and Peter (1808); all but four lived to adulthood. In 1809, General John Smith became an active member of the Second, Upper and Western Regiment of the Morris Militia, achieving the rank of Brigadier General in 1818.[39] He was also an active member of the Methodist Episcopal Church in Lockwood helping to support its construction in 1835, and of the Waterloo Methodist Episcopal Church in Waterloo helping with its construction (along with his two youngest sons, Nathan and Peter) in 1859. He also served as a county Freeholder.[40]

According to the deeds filed for General John Smith's purchases, Smith began purchasing property in the vicinity of Waterloo in 1802, when he purchased over 121 acres from Martin Ryerson.[41] This property was located on both sides of the Musconetcong River, with the north side located in Byram Township. According to the deed, the property was adjacent to fields that General John Smith already owned in Byram Township. He was at that time living in Independence Township (then part of Sussex County and the adjacent neighbor to Byram Township). In 1813, Gen. John Smith purchased additional property in Morris County, Roxbury Township (the property where the Inclined Plane currently stands on the Morris County side of the river).[42] In 1823, he purchased additional property

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Pioneers (Philadelphia: Everts & Peck, 1881), 467.

[36] Snell, 468.

[37] A second genealogical history "Smiths of Sussex and Morris Counties, NJ; The Descendents of Ezekial & Johannah Smith" by Robert Harold Smith, P.E., (no date) found at the Morristown and Morris Township Public Library provides slightly different information on John Smith so both should be consulted when developing the interpretative plan for the village.

[38] Alden D. Smith and Robert H. Smith, *The Genealogy of the Smith Family of Waterloo, New Jersey*. (Waterloo Foundation for The Arts, 1984), 6.

[39] Smith, *The Genealogy of the Smith Family*, 6.

[40] The title research conducted for this nomination focused on the Waterloo Village properties to the extent practical; however, it should be noted that General John Smith was one of the largest landowners in the region in the early-19th century and owned land in both Morris and Sussex Counties. Title research focused primarily on the heart of the Waterloo property (the area encompassing the main houses, store, and mills), but also deals with the land on the south side of the Musconetcong River. Some of the land titles crossed the river and included multiple tracts in both counties. In addition, the Lawrence line, which divides East and West Jersey, runs through Waterloo and as a result, the original deeds were filed with either the East Jersey or the West Jersey Proprietors depending on which side of the line the property was located.

[41] March 29, 1802. Martin Ryerson to John Smith. DBK W2, pg. 101. Sussex County.

[42] March 13, 1813. Abigail Condict to John Smith. DBK X, pg. 69. Morris County.

from Hannah DeCamp in Roxbury Township near New Andover and the Lubber's Run Bridge.[43] At this time, he was living in Roxbury. He purchased an additional thirteen tracts of property from Hannah DeCamp in 1828, which encompassed thirteen tracts of land in Byram Township and a large area from Old Waterloo Road to the north including the plot of land inclusive of the blacksmith shop.[44] The land was approximately 530 acres and started at the corner of "Old Forge Pond." By 1828, the General was listed as living in Byram Township. General John Smith also purchased property from George Maxwell and Isaac Ogden, but the date of the purchase is unknown because the deed was unrecorded. This purchase spanned both sides of the Musconetcong River. Together with the DeCamp purchases, this makes up a large part of the Waterloo property currently at the heart of the village, including the lock property and a portion of the canal to the west.

All of the property at Waterloo was consolidated in 1843 when General John Smith sold it to his two sons, Nathan and Peter. Composed of seven tracts of land totaling 934 acres, it included property in both Roxbury Township (Morris County) and Byram Township (Sussex County). According to Jim Lee in his book on the Morris Canal, the Smiths owned 2,000 acres in the area by 1820.

Of the General's sons, there are three that appear to have played a role at Waterloo: Peter was the most prolific, followed by Nathan and possibly William Oliver. Peter Smith, the youngest son of the General, was born in 1808 and married Mariah Johnson in 1831. Mariah was from Byram Township and the two were married in the Lockwood Methodist Church. They had eleven children, John J. (1831-1845), Samuel T. (1833-1898), Almira (1836-1838), Maryette (1837-1838), an infant daughter who died at birth (1838), Matilda (1840-1906), Caroline (1843-1875), Peter D. (1845-1918), Seymour Royal (1847-1932), Nathan Augustus (1850-1936), and another infant daughter who died at birth (1854); in all six children lived to adulthood. Peter's children carried on the legacies of their father and grandfather at Waterloo Village.

Nathan Smith was also actively involved with his father's business enterprises. He was the second youngest son of the General, and was born in 1806. He married Matilda Hart but the year of their marriage is unknown.[45] Nathan passed away in 1852, followed closely by his wife, who committed suicide. They did not have any children.[46]

The third youngest son, William Oliver, appears to have lived for a time at Waterloo.[47] He was born in 1805, married Anne Elizabeth Ort in 1829, and they had six children. According to the Smith genealogy, the family moved to Fulton County, Illinois (date of move is unknown). By the time of the Illinois Federal Census, 1860, William was living with his wife Anna and his youngest son Jacob in Illinois. He was a farmer and appears to have owned property in Illinois.[48]

In July 1831, the Morris Canal and Banking Company acquired 3.30 acres of land for building the Morris Canal from John Smith via condemnation proceedings; 1,800 feet in Byram Township, Sussex County and 1,100 feet in Roxbury

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43 This property may be near or at the site of New Andover Furnace.
44 December 8, 1828. Hannah DeCamp to John Smith. DBK G3, pg. 257. Sussex County.
45 After the review of a few historical documents, the date of his marriage has not yet surfaced.
46 Smith, *The Genealogy of the Smith Family*, 6.
47 At the time of the New Jersey Federal Census, 1850, William lived in Waterloo but did not own property and was listed as a farmer and his eldest son was listed as a laborer.
48 Ancestry.com. *1860 United States Federal Census* [database on-line]. Provo, UT, USA: The Generations Network, Inc., 2004. Original data: United States of America, Bureau of the Census. *Eighth Census of the United States, 1860*. Washington, D.C.: National Archives and Records Administration, 1860. M653, 1,438 rolls, p. 419.

Township, Morris County (Weir Tract #524).[49] The construction of the Morris Canal at Waterloo in 1831 included Guard Lock 3 West and Inclined Plane 4 West. The canal crossed the Musconetcong River between the lock and plane so that the plane is located in Morris County and the lock in Sussex County. The millrace from the milling operations northeast of the lock crosses underneath Lock 3 West, making the structure a combined lock and aqueduct.[50] The guard lock served to dam the slack water of the Musconetcong River as the canal continued to the west. The inclined plane had to be cut into the hillside and retaining walls installed to support the change in the landscape. Initially, the plane was a double plane allowing two boats to pass each other at the same time. When the canal was refurbished in the 1850s, the plane became a single plane. The Morris Canal Company also constructed a dam just to the west of where the boats crossed the Musconetcong River in order to raise the level of the river and allow the boats to cross. A wood bridge was erected across the river for mules and pedestrians to cross between the plane and the lock.[51]

An agreement concerning water rights between the Morris Canal and Banking Company and John Smith in January 1831 provides critical information on the location of many of the pre-canal buildings and raceways that were impacted by the introduction of the Morris Canal to Waterloo Village. The agreement states that the canal company has already constructed a dam across the Musconetcong River near the old Andover Forge, and by doing so raised the water to the height of the dam therefore impacting milling operations. As a result, the canal company agreed to construct an aqueduct or culvert and raceway under the canal allowing the waterpower from the works to be discharged into the river below the canal. It further states the aqueduct or culvert would be twenty-feet wide, extend fully across the canal, and allow the full flow of water at the "seat of the old grist mail and to run to and through the said aqueduct or culvert to the River below and to be sufficient to drain the water as low as the bottom of the old tail races of the old forge and Grist Mill."[52] This agreement combined with the 1782 Andover Forge lease agreement shows that the grist and saw mill related to the forge era were located near the current location of Lock 3 West, and that by the time of the construction of the Morris Canal at Waterloo, it appears the coal house had been converted for use as a grist mill, and it confirms the forge was no longer in operation.

After the construction of the Morris Canal, General Smith and his sons added to the landscape over time. Based on various sources, one of the first new buildings may have been the General Store, which was constructed in 1831. The following is an observation of the General Store made in 1939:

> "Flush with the bank of the canal, so that no gangplank was needed from the deck of the boat to the floor of the shop, is a barnlike Smith's Shop, the only retail shop in Waterloo. Here, in the large trading-room, newly painted and heated by a pot-belly stove in a place once given to mule trading and tall stories of adventure on the canal, are flour bins, counter, tea-chests, shelves, and harness racks, with a meager stock of modern, trade-marked package goods. A central pillar supporting the roof has been worn to a rounded base by the scuffling of numberless hobnailed

[49] Agreement No. 24 Between the Morris Canal and Banking Company and John Smith dated January 7, 1831. New Jersey State Archives, Morris Canal and Banking Company, Agreements and Leases, Notebook, 1923-1930s, Land Along the Canal, Book 3.
[50] Robert R. Goller, *Images of America: The Morris Canal; Across New Jersey by Water and Rail* (Charleston, SC: Arcadia Publishing, 1999), *Images of America*, 42.
[51] Joseph J. Macasek, *Guide to the Morris Canal in Morris County* (Morristown, NJ: Morris County Heritage Commission, 1996), 45 - 47.
[52] Agreement No. 24 Between the Morris Canal and Banking Company and John Smith dated January 7, 1831. New Jersey State Archives, Morris Canal and Banking Company, Title Paper Files, Deeds, Envelope #524

boots that once trod the towpath beside the mule…"[53]

The account goes on to mention "the giant wheel with spindles that hoisted necessaries from the canal boats."[54] Based on the title transfers in 1828 to Hannah DeCamp and the New Jersey Federal Census, 1830, General John Smith was either living in Waterloo proper or near Lubber's Run at the New Andover Forge, of which he was part owner. He was listed as John Smith Esquire, similar to his title in the deed from 1828 and there were eleven people in his household. Unfortunately, as only the number of people was listed and not the names of each, it is difficult to know with whom he may have shared a residence.[55]

The early years of the Morris Canal were fraught with problems and canal operations were not financially secure; however, the region developed and the iron industry re-awakened. As of the New Jersey Federal Census, 1840, which was a head of household census, the General was living in Byram Township in close proximity to three of his sons, William O., Nathan, and Peter. General John Smith sold approximately 900 acres at Waterloo to his two youngest sons, Peter and Nathan, in 1843. At that time, Nathan was aged 37 and Peter was 35. Peter and Mariah had John J., Samuel, Matilda and Caroline living at home. Some happenings in the late 1830s and 1840s included a robbery at the "Store of John Smith & Sons" in October 1842,[56] and in 1836 the shaft of the water wheel of Inclined Plane 4 West broke causing one boat to rush up the plane and one to crash down causing significant damage.[57] A post office was established at Waterloo in 1847; Peter Smith was the postmaster.[58] According to the *Sussex Register,* John Smith & Sons only began to transport goods along the canal in 1848. The impetus for this may have been the reopening of the Andover Mine in 1847.

One of the more important changes that impacted the region's economy and development in the middle years of the 19th century was the reopening of the Andover Mine in July 1847 by Peter Cooper, Edward Cooper and Abram Hewitt of the Trenton Iron Company. The iron ore mined at Andover was first taken by wagons from the mines to Waterloo for shipment along the Morris Canal to the Thomas Iron Furnaces in Allentown, Pennsylvania. In 1848, the Trenton Iron Company chartered the Sussex Mine Railroad so that the iron ore could be more readily transported between the mines and Waterloo.[59] The original incorporators of the Sussex Mine Railroad were Peter Cooper, Abram S. Hewitt, Edward Cooper, David Ryerson, Andrew A. Smalley, John Willis, Alexander McKain and Nathan Smith of Waterloo. Although stock subscriptions were open, most were taken by Cooper & Hewitt of Trenton. The railroad ran from the Andover Iron mine to the Morris Canal at Waterloo. According to the *Sussex Register* in 1850, "The impression now is that the terminus will be fixed at Waterloo, instead of Stanhope. It seems to be peculiarly a work of private enterprise, though circumstances may yet induce the proprietors to adapt the road to public convenience and accommodation."[60]

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53 Henry Charlton Beck, *Tales and Towns of Northern New Jersey* (New Brunswick: Rutgers University Press, 1964), 88.
54 Beck, 88.
55 Ancestry.com. *1830 United States Federal Census* [database on-line]. Provo, UT, USA: The Generations Network, Inc., 2004. Original data: United States of America, Bureau of the Census. *Fifth Census of the United States, 1830*. Census Detail: Year: 1830, Census Place: Byram, Sussex, New Jersey; Roll: 82; Page 181.
56 Ancestry.com [database on-line]. Original data: *[Newspaper clippings from the Sussex Register]*. Newton, N.J.: *The Register*, 1897-1899. 48.
57 *Sussex Register*, 33.
58 *Sussex Register*, 66.
59 Kevin Wright, "Newton and the Iron Horse: A History of the Sussex Railroad"; available from www.newtonnj.net/pages/railroad.htm; Internet; accessed 8 August 2008, 3 - 4.
60 *Sussex Register*, January 1850, p. 76.

Constructed in 1851, the Sussex Mine Railroad was a mule tramway consisting of small ore cars that could hold between six and eight tons of iron ore. The cars, also called "Jimmies," were dragged by three or four mules from the mine to the White Hall Summit and then conveyed by two mules by gravity along the downgrade to Waterloo for continued transportation along the Morris Canal.[61] The original rail ran between what is now the site of the Waterloo Methodist Church and the Nathan Smith House at the west end of Waterloo Valley Road, and proceeded north to the other side of what is now Route 604, and then headed east along the current road before heading north again.[62]

In 1852 the Morris & Essex Railroad, which ran from Newark via Morristown to Dover and carried both freight and passengers, began an expansion to Hackettstown via Waterloo. At the same time the Sussex Mine Railroad was considering an expansion of its line to Newton, including a conversion to steam locomotion rather than mule-driven operations.[63]. In an effort to benefit from the Sussex Mine Railroad's expansion, the Morris & Essex offered the Sussex Railroad "a drawback of 33-1/3% on all traffic delivered at Waterloo for transport over its line, if it were ready for use on the day the Morris & Essex reached the point of intersection."[64]

In 1853, the Sussex Mine Railroad changed its name to the Sussex Railroad Company and the New Jersey Legislature authorized the railroad's extension to the Delaware River.[65] Work began in May 1853 and the first locomotive made the trip to Newton in November 1854. The Morris & Essex Railroad to Hackettstown was completed in January 1855 making it hold to its agreement, noted above, with the Sussex Railroad Company.[66]

The Sussex Railroad was constructed of rails produced at the Trenton Iron Company. Local newspapers bragged that this railroad was made in America, "The reproach that has been cast upon some railroad companies that they have overlaid beds of American ore with rails of English iron does not apply to this road. It is American in all its parts; built by American capital, and rounded off and riveted with sound, substantial American iron."[67] The new railroad was installed with a new alignment and the old line abandoned. The new line originated on the south bank of the Musconetcong River in Morris County, where it connected with the Morris & Essex Line at a new terminus, Waterloo Station. In addition, new ore docks were created on the south bank of the river, which connected to the Sussex Railroad east of Inclined Plane 4 West. In order to cross the canal, the Sussex Railroad constructed a bridge with stone embankments over the plane.[68] The *Sussex Register* reprinted the passenger totals for the year 1857 on the Morris & Essex: 273,359 passengers exclusive of commuters, and 8,726 of those originated from Waterloo, which was second only to Morristown.[69]

Nathan Smith was involved in both regional development and New Jersey politics. As previously noted, he was a founding member of the Sussex Mine Railroad. He also served as a New Jersey State Senator from 1847 to 1849. During the development of the railroad, Nathan Smith passed away on March 6, 1852, and his wife committed suicide on June 16 of the same year. According to the New Jersey Federal Census, 1850 for Byram Township, Nathan was living with his wife Matilda, two young women, and two men, William Smith, aged 30, and Andrew Mooney, a

[61] Wright, "Newton and the Iron Horse: A History of the Sussex Railroad", 3 - 4.
[62] Macasek, 44-46.
[63] Wright, "Newton and the Iron Horse: A History of the Sussex Railroad," 4.
[64] Wright, "Newton and the Iron Horse: A History of the Sussex Railroad," 4.
[65] This is permission to extend to the Delaware River, but the railroad is not required to extend its line that far.
[66] Wright, 4-5.
[67] *Sussex Register*, 104.
[68] Macasek, 44-46.
[69] *Sussex Register*, 131.

laborer. He owned $30,000 in real estate and resided near his brother Peter Smith. The brother, William O. Smith, also lived near his brothers. With the loss of his brother, Peter appears to have taken on the responsibility of running the Smith enterprises.

There are some interesting findings in the New Jersey Federal Census, 1850, that provide a picture of Waterloo Village in the mid-19th century. The Waterloo Hotel, established in 1847, was noted as such, and General Smith appears to have been living closer to Waterloo Village than to Andover Forge. Based on the proximity of his residence to that of the Waterloo Hotel, he may have been living at the Homestead. It should be noted that the *Sussex Register* reports that "Gen. Smith's house at New Andover (Waterloo) was destroyed by fire" in April 1847;[70] however, since the General owned multiple residences, it may not have been the one in which he resided. In this 1850 census, General John Smith was living with his second wife, Catherine, as well as a 19-year-old Catherine, who may have been the daughter of William O. Smith. According to the genealogy, Catherine, the granddaughter, passed away in 1848, but this information may be wrong. They were also living with Jackson Rose, age 15, and Ephraim Chamberlain, age 22, who was a bloomer by profession. The General was listed as a farmer owning $30,000 in real estate. Peter Smith was residing with his wife Mariah; their children Samuel T., Matilda, Caroline, Peter D., Seymour R., and Nathan Augustus, who was an infant; and Mary Johnson, possibly his mother-in-law; a niece or sister of Mariah; Rachel Smith (age 45) whose relationship with the family is unknown; and a laborer, Henry Whitesell. Where exactly Peter and Nathan resided in proximity to their father is unknown.[71]

The more interesting entries in the New Jersey Federal Census, 1850, were the number of people living within the Waterloo Hotel. This would have been the period the Morris Canal was expanded and the Sussex Mine Railroad was in operation. According to the census records, Charles Crane, 47, was the hotelkeeper and he lived with his wife, Sarah, son Isaac, who was the barkeeper, his daughter Ann, and son George. Also in residence were Esther Atno; Christine Case; Aaron Chamberlain, 28, a stage hand; Joseph (?) Baldwin, 44, stage driver; Jacob Lyon, 24, blacksmith; Philip Lyon, 19, blacksmith; Thomas Hollis, 32, laborer; Adolphus Savary, 26, civil engineer; John Savary, 21, civil engineer; Nicholas Harlam, 28, laborer from Ireland; John McGuire, 29, laborer from Ireland; Barry Gillan, 49, laborer from Ireland; and George Raymond, 47, millwright.[72]

Based on the architecture, as well as a logical sequence of events at the village, specifically the increased traffic generated by both the canal and railroads, and a growing economy, Waterloo Village expanded in residential construction in the 1840s. Buildings that currently exist that may have been constructed during this period include Worker Houses 1 and 2. A map of the area made in 1850 appears to show, at the residential level, the Samuel T. Smith House, Worker House 2, the Waterloo Hotel, the Homestead, Worker House 1, as well as a number of outbuildings. In addition, the Gristmill and historic sawmill also appear on the map, along with the Blacksmith Shop, General Store and a weigh house, which is seen in historic photographs located to the north of Lock 3 West.

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[70] *Sussex Register*, 63.

[71] The instructions between the 1850s to at least the 1880s were the census enumerators were to enter the families/dwellings visited in the order in which they made the visitation; therefore, this does not necessarily mean they visited them in their physical order in the landscape. The location of the hotel in the census does provide some sense that the census taker was at Waterloo Village for the immediately surrounding entries, but it does not preclude that he was also near the Frenches' property or at New Andover Furnace, both a distance from the center of the village There should be no assumption that two back-to-back entries automatically mean the occupants lived directly next to one another.

[72] Ancestry.com. *1850 United States Federal Census* [database on-line]. Provo, UT, USA: The Generations Network, Inc., 2005. Original data: United States of America, Bureau of the Census. *Seventh Census of the United States, 1850*. Year:1850; Census Place: Byram, Sussex, New Jersey; Roll: M432_464; Page: 232; Image:464.

The growth of the village included the construction of a school in 1842 and the construction of the Waterloo Methodist Episcopal Church in 1859.[73] Prior to the construction of the church, residents went to services at the Lockwood Methodist Episcopal Church. In 1859, when it was time to raise funds for the church at the village, Peter Smith donated the land for both the building and burial ground as well as pledged $500 toward construction. The General also contributed $200, and Samuel T. Smith contributed $100. Neighbors to the Smiths who contributed include James C. Ayres, who was employed at the Smith's General Store, and Samuel W. Stackhouse, Esq.[74], who was listed as a blacksmith in both the New Jersey Federal Census, 1870, and the New Jersey Products of Industry, 1870. The cornerstone of the church was laid August 9, 1859; the building cost $2,993.22, and the congregation had its first services February 9, 1860.

General John Smith died December 22, 1859. It is likely that if there was property in his possession at the time of his death, Peter Smith received the bulk of it at Waterloo Village and environs. In the New Jersey Federal Census, 1860, Peter Smith owns real estate worth $20,000 and personal property valued at $10,000. By this time, his eldest son 26-year-old Samuel was listed as a merchant while the remaining boys were in their teen years.[75] In 1858, it was Samuel T. Smith who was noted as advertising coal and other goods for sale at the Smith General Store.[76] The Waterloo Hotel may have changed hands a couple of times in ten years, as an annual oyster supper at "Bartow's Waterloo hotel" was advertised in the *Sussex Register* in January 1856.[77] However, by 1860 the Waterloo Hotel was operated by James B. Case with fewer occupants than in 1850[78] and James Bartow was listed as a farmer. Also at this time, Peter Smith may have been occupying the Homestead with his wife and children, his mother-in-law, and one domestic servant.[79] It is interesting to note that Peter Smith's neighbors included boatmen, a shoemaker, farmers, numerous laborers, blacksmiths, and millers. In 1856, Charles D. Rue, who leased the gristmill from the Smiths, was seriously injured when his arm was caught in the gearing.[80] The other mills were probably also leased.

Waterloo Village and Andover Forge, and the juxtaposition of the two are shown in the 1860 *Atlas of Sussex County*.[81] This map shows Peter Smith owning two residences. The hotel, a school, the Methodist Church, and the new alignment of the railroads are also shown. It appears that the General Store has S. Smith written below it, which corresponds with Samuel T. Smith being in charge at that time. There are at least three other residential buildings shown, and these appear to be Worker Houses 1 and 2, and the Samuel T. Smith House. There are other notations that are illegible, but these appear to reference the mill buildings.

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73 McMickle, 12.
74 McMickle, 13.
75 Ancestry.com. *1860 United States Federal Census* [database on-line]. Provo, UT, USA: The Generations Network, Inc., 2004. Original data: United States of America, Bureau of the Census. *Eighth Census of the United States, 1860*. Year: 1860; Census Place: Byram, Sussex, New Jersey; Roll: M653_709; Page: 660; Image: 573.
76 *Sussex Register*, 133.
77 *Sussex Register*, 113.
78 Ancestry.com. *1860 United States Federal Census* [database on-line]. Provo, UT, USA: The Generations Network, Inc., 2004. Original data: United States of America, Bureau of the Census. *Eighth Census of the United States, 1860*. Year: 1860; Census Place: Byram, Sussex, New Jersey; Roll: M653_709; Page: 660; Image: 573.
79 Ancestry.com. *1860 United States Federal Census* [database on-line]. Provo, UT, USA: The Generations Network, Inc., 2004. Original data: United States of America, Bureau of the Census. *Eighth Census of the United States, 1860*. Year: 1860; Census Place: Byram, Sussex, New Jersey; Roll: M653_709; Page: 660; Image: 573.
80 *Sussex Register*, 117.
81 The quality of the map obtained from the Morristown and Morris Township Public Library is unfortunately poor due to their original was out for conservation. It is recommended to locate a better-quality image for future use.

Peter Smith was a merchant and landowner, and like his brother Nathan, was also actively involved in the regional community and New Jersey politics. Peter Smith served in the New Jersey State Senate from 1862 to 1864, was a Sussex County Freeholder and served as an inspector of the State prisons. He was a founding board member of the Hackettstown National Bank, created in 1852, served as director beginning in 1855 for several years and remained a member until his death. He was also a director of the Hackettstown Mutual Fire Insurance Company. Peter Smith was active in religious affairs beyond the erection of the Waterloo Methodist Episcopal Church and continued service to it, including being active in the Newark Conference Centenary Collegiate Institute at Hackettstown[82], and as a member of the Newark Conference Camp-Meeting Association. Samuel T. Smith, Peter and Mariah's eldest son, was educated at Waterloo, followed by education at Wesleyan Institute in Newark, New Jersey. After completing his education, he worked with his father until he purchased the business in the later years of the 1860s[83] and became sole manager. Samuel married Frances M. Dunning in 1866; they had no children.[84]

According to the New Jersey Products of Industry, 1870, Samuel Smith and Brothers owned and operated the grist, plaster and saw mills, operating three stones at the gristmill, two stones at the plaster mill and one saw at the sawmill. They were grinding rye, corn, oats, buckwheat and wheat at the gristmill, which corresponds with the New Jersey Products of Agriculture, 1880. This census shows: corn, oats, rye and wheat were produced on their farmland; and boards and lath were produced at the historic sawmill. Samuel was responsible for updating the gristmill in 1863.[85] The configuration of the gristmill operations at that time is unknown, but this was a period of transition for milling operations and either wood wheels or turbines may have been utilized to power the grinding stones.

It appears, based on the architecture as well as the economic prosperity in the village, that there was another building boom in residential construction in the mid-to-late 1860s. This boom included the construction of the Nathan Smith House, the Canal Museum (Teacher's Residence/S-22) and possibly the Administration Building (S-23). The Poyer House located on the Morris County side of the river also appears to date to this period. No maps from this period have been found that would confirm this architectural evolution; the construction detailing and general size of each building show enough similarities to draw this conclusion.

According to the New Jersey Federal Census, 1870, Peter Smith was a Retired Merchant by 1870 and living with his wife, and his children, Matilda, aged 30, Peter D., 24, and Seymour R., 22. Nathan Smith, 21, lived in a separate residence with his wife Lydia and their newborn son, Clarence, and shared his residence with John Henderson, a farm laborer, and his family. Peter, Jr., Seymour R. and Nathan each owned $5,000 in property and had personal estates valued at $5,000. Samuel T. Smith lived with his wife Frances and a domestic servant.

The late 1860s and early 1870s saw the height of the Morris Canal as well as the expansion of the railroad for commercial and passenger traffic; both of these were in close proximity to Waterloo Village and therefore had an impact on its prosperity. The railroad and canal also may have been contributing factors in the village's expansion in the 1870s. According to a brief history of the Sussex Railroad prepared by Kevin Wright, a large trestle and chute for transferring ore from rail cars to Morris Canal boats was constructed in 1879 at Waterloo Village. Much of this ore

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82 The precursor name to Centenary College.
83 Tiffany Hardiman, *Waterloo Village and the Smith Family*, no page numbers.
84 Smith, *The Genealogy of the Smith Family*, 22
85 Robert Harold Smith, P.E., "Smiths of Sussex and Morris Counties, NJ; The Descendents of Ezekial & Johannah Smith" (no date, available at the Morristown and Morris Township Public Library).

was from the Franklin Mines.[86] A new telegraph line was erected in 1879 between Waterloo Village and Franklin.

Caroline Smith, Peter and Mariah's seventh child, returned to Waterloo Village in 1870 due to illness, and passed away March 4, 1875. She had married James Harvey Cook and had one child, Pierre Frederick. Peter Smith passed away at the age of 69 on March 12, 1877.[87] Although his will was not located as part of the research for this nomination, the deeds researched note that Peter divided his property amongst his surviving children. This included interest in any profits from mining from all properties divided amongst them. The only clear property conveyance gleaned from the title search is the property left to Matilda, which was located to the east of the Sussex Railroad. The other properties mentioned in the deeds tended to be west of the railroad; it is unclear whether Matilda's land was developed and what its proximity was to the center of New Andover Forge. Matilda married Ogden Randolph Van Doren sometime in the 1870s and had two children, the first of whom died at birth.[88]

In 1874, Seymour R. Smith joined with his brothers Peter D. and Samuel T. in running the family businesses. Seymour R. Smith took after his father by serving in the New Jersey State Senate between 1873 and 1876. He was a director of the North Ward National Bank of Newark, and the First National Bank of Washington, N.J. His brothers were equally active. Peter D. Smith married Ann Elizabeth Sanford in 1871 and they had four children, two of whom lived to adulthood. He also served in the New Jersey State Senate between 1889 and 1891. Seymour R. Smith married Charlotte Elizabeth Snover in 1873 and they had two children, only one of whom lived to adulthood. A little more is known of Seymour R. Smith than Peter D., possibly due to his tenure at the Hackettstown National Bank. Seymour was first educated at Waterloo Village followed by Pennington Seminary and finally graduating from Rutgers College with a Master of Arts in 1868. Seymour R. Smith was the fourth president of the Hackettstown National Bank[89] beginning in 1890, and was also the postmaster for Waterloo from 1877 to 1898.

A portion of the Smith Brothers' Journal from the operations of the General Store was found on microfilm[90] and only a cursory review was given to it. The period was July 1878 to May 1883 and included both transactions for the store as well as a record of rents collected from this period. Some of the Smith customers include Cascade Mine, Lehigh Valley Railroad (they paid the wages on behalf of the railroad), Morris Canal DM Ferry Co. [sic], the Waterloo School District, as well as a number of individuals, such as Byram Pitney, Morris T. Bird, George M. Mooney and many others. All of the Smiths, including the mother and their sister had accounts. It appears based on this cursory glance at the records that in the late 1870s the clients were few and included mostly the Smith family members; however, in the 1880s the client list began to expand and included the companies listed above. Renters included Byram Pitney, Mrs. Stackhouse, J. Hurd, Wm. Hunt, and S. Lawrence. S. Lawrence was noted as renting hotel property. Byram Pitney rented a house and shop and J. Hunt rented a house and cow pasture.

There was prolific building of residential architecture including substantial carriage houses in the 1870s. Peter D. Smith constructed his home, c. 1871, soon after marrying. It is probable that his carriage house was constructed soon

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[86] "Andover Mine"; available from **http://www.ironminers.com/ironmines/andover-mine** ; Internet; accessed August 9, 2008, p. 1-4. (According to this article, the Andover mines were sold by the Trenton Rail Company in 1867, the mine was operated for a period after 1871 and upgrades to the Sussex Railroad made, however its later history is obscure.)
[87] Smith, *The Genealogy of the Smith Family*, 22.
[88] Smith, *The Genealogy of the Smith Family*, 22.
[89] A. Van Doren Honeyman, editor-in-chief, *Northwestern New Jersey: A History of Somerset, Morris, Hunterdon, Warren, and Sussex Counties.* 4 vols. (New York: Lewis Historical Publishing Co., 1927), 42-43.
[90] "1878 Smith Brothers Journal" Microfilm MF LH077 as prepared by the New Jersey Division of Archives and Records Management and found at the Morristown and Morris Township Public Library.

thereafter to house his carriages and other equipment. Based on a number of sources, the Seymour R. Smith House was constructed c. 1876. It may have been constructed partially on the foundation of an older building; the rear kitchen and the center section of the front part appear to rest on an older foundation. However, the 1850 and 1860 maps do not substantiate this unless it was constructed on an outbuilding, which may not have been shown on these maps. The Homestead was renovated at about the same time as the construction of the Seymour R. Smith House, including the addition of the front porch, the bay projections and modification of the interior trim, doors and other features. Some of the interior details, such as the wood bases, the archway detailing around the bays, and the bay window structures, are exact matches to the detailing of the Seymour R. Smith House.

The Samuel T. Smith House appears to have been modified on at least two occasions in the mid and late-19th century. This house appears to have been the home of Samuel and his wife and at about the same time his brothers were building their houses, the interior of his house was renovated and the rear kitchen wing may have been added. The plan of the kitchen and detailing of cabinetry are almost identical to the other residences. The building was expanded again in the late 1870s (or early 1880s) by adding a substantial wood frame wing to the southwest of the original 18th-century masonry residence. The work of this campaign included additional modifications of the interior, modernizing the existing exterior detailing and the addition of the front porch. It is known that this addition was constructed after the Peter D. Smith House, as it is seen in a late-19th-century photograph without the southwest addition.

Interior lighting at Waterloo Village is a key component at both the Peter D. and Samuel T. Smith Houses, which appear to have shared a domestic gas lighting system; the gas light fixtures still remain at the Samuel T. Smith House. Beginning in the mid-1800s, municipal gas works were becoming more prevalent in major cities in both Europe and America. American inventors also developed isolated domestic gas machines that could provide illuminating gas for a single building or a small group of buildings in any location.[91] Although gas lighting was used on a limited basis beginning in the early-19th century, it was not until after the Civil War that gas lighting was used in a more widespread way in urban areas in America.[92] Domestic gas lighting apparatus, typically using coal for the gas-making, became prevalent in the 1870s and 1880s before having to compete with electricity in the 1890s.[93]

The Homestead outbuildings that remain, including the Homestead Barn and the Seymour R. Smith Carriage House, may date to the 1860s and 1870s respectively, based on their architectural styling. One barn, originally located in proximity to Worker House 1 and similar in style to the Seymour R. and Peter D. Smith Carriage Houses, was moved to the other side of Route 604 during the Waterloo Foundation era. The Samuel T. Smith Carriage House was constructed during this period of domestic expansion. Another small barn, known as the Pottery Barn during the Foundation era, was located to the north of the Seymour R. Smith House and may also have been of this general period; it was destroyed by fire in the early 2000s. There were numerous other outbuildings at Waterloo that would have supported both domestic and agricultural activities at the village. The dates of their construction and demolition are unknown, but they are visible in the historic photographs.

According to the New Jersey Products of Agriculture, 1880, the Smith Brothers (Samuel T., Peter D. and Seymour R.) owned and leased 180 acres of tilled land and 500 acres of woods. Their land was valued at $15,000, with machinery valued at $250 and livestock at $500. The cost of building acquisition in 1879 was $150, and they paid $1,000 in labor

[91] William E. Worthington, Jr. , "Beyond the City Lights: American Domestic Gas Lighting Systems", Exhibit at the National Museum of American History: October 17, 1985 – April 20, 1986, 1.
[92] Worthington, 5.
[93] Worthington, 14- 16.

and employed help year-round. They owned five horses, produced twenty tons of hay, owned two milch cows, six other types of cattle and dropped one calf. Their focus in farming was corn, oats, rye and wheat. Their brother Nathan Augustus owned 125 acres of tilled land and 150 acres of woods. His property was valued at $4,000 and he owned $300 worth of livestock; he did not own machinery and did not employ laborers. He purchased buildings for a cost of $250 in 1879. He owned three horses, produced twenty tons of hay, owned seven milch cows, two other types of cattle, and dropped seven calves. Unlike his brothers, he owned apple orchards, made butter, and produced buckwheat, corn, oats, rye, wheat and Irish potatoes. He also owned one sheep and nine swine. Interestingly, his occupation in the New Jersey Federal Census, 1880, was listed as merchant.

According to the New Jersey Federal Census, 1880, each of the Smiths and their family appear to have been living in close proximity to each other. Mariah Smith was living with her daughter Matilda and son-in-law Ogden Van Doren. Each of the families had only one servant living with them. Samuel Smith was an "Agent of New Jersey Central." The Waterloo Hotel continued to operate with Mr. Lawrence as the proprietor. Their neighbors included blacksmiths, farmers, and laborers; the laborers were specifically farm and railroad laborers, millers, and miners. Unfortunately, much of the New Jersey Federal Census, 1890, was destroyed by fire and the next batch of information on the residents of Waterloo comes from various records and the New Jersey Federal Census, 1900.

In 1878 and 1882, Samuel T. and Seymour R. Smith conveyed land to their brother, Peter D. Smith. Based on the description, this land appears to be near the Smith family residences; Peter's rear kitchen wall and stone were points of reference as was Samuel Smith's fence line.

In the late 1880s, Samuel Smith, Peter Smith and Seymour Smith established the Waterloo Ice Company just east of Waterloo Village on the Morris County side of the river. As part of the company operations, the Smiths dammed the Musconetcong River at the point where the river narrows just upstream of the village core. This dam was of earthen and masonry construction including a masonry and concrete spillway that was built in the center of the dam to allow passage of the majority of the river's flow. A head race intake was built at the northern end of this dam to maintain supply to the mills; the head gate for this race was probably located approximately 200 feet downstream of the dam. These land modifications create an approximately 50-acre impoundment upstream of the village adjacent to the five ice houses that also were constructed on the water's edge. This impoundment allowed the water to freeze evenly and the ice to be cut without the concern for the river's current. In addition to the other improvements, a bypass channel was created along the northern bank of the river to keep the flow of the river from interfering with operations on the southern bank.

The ice harvesting operations consisted of five ice houses positioned along the lake shore and included ice elevators, at least two different engine houses, an outhouse, a company office and dwelling, and three railroad sidings. The ice houses appear to have had a capacity of 30,000 tons of ice. The Sussex Railroad provided a series of three railroad sidings, which branched off from the main line in order to access to the Waterloo Ice Company plant.[94] These sidings would have delivered coal and other materials to the plant for operations and would have been used to transport the ice blocks to market. The Waterloo Ice Company ceased operations in 1917.

After the 1880s, the Smith brothers began to move away and Peter D. Smith appears to have taken over much of the operations at Waterloo. Nathan Smith moved to Newark and Seymour R. Smith moved to Hackettstown but kept his residence at Waterloo for the summer. Samuel T. Smith passed away in 1898. His wife Fannie stayed on at Waterloo

[94] Sussex Railroad Field Books, p. 47, August 14, 1888. Manuscripts on file, Steamtown National Historic Site, Scranton, Pennsylvania.

at least until 1900, dying in 1917. Seymour R. Smith's wife passed away in 1911.

In 1901 a railroad bypass was constructed from Netcong to the Sussex Branch, keeping about half the track in place to service the Waterloo Ice Company.[95] The closing of the Waterloo railroad depot as well as the cessation of operations along the Morris Canal by 1903 had an impact on the once-thriving village converting Waterloo Village to a backwater town.

By the New Jersey Federal Census, 1910, the only Smith residents were Peter with his wife, his son Sanford and his son Samuel's wife (Samuel passed away in 1904). This is the first census where Waterloo Village was indicated as the place-name and Waterloo Road was noted; all previous censuses for the area did not indicate the name of the road or house numbers and indicated Byram Township only. According to this census there were 14 buildings with inhabitants. Whether these were all houses is not distinguishable. All of the residents were renters with the exception of Peter D. Smith. At this time, the Cassidys were managing the General Store; they were listed also in the New Jersey Federal Census, 1900, and ran the store from 1898 to 1916[96]. Cassidy was also the postmaster. The sawmill was still active, but according to one source, the gristmill had ceased operation in about 1898.[97] The foreman for the ice houses, Harrison Smith, lived a few doors from Peter D. Smith. According to one source, Harrison Smith constructed the house now known as the Canal Museum,[98] but more than likely he rented the house from the Smith family.

Prior to 1932, the Smith family tried to develop the site as Lake Waterloo Estates, but the plan apparently failed due to the Depression. The plan was to create a country club, and three different types of subdivisions. The first subdivision was to have small plots, 65 x 100 feet for small cottage-type houses; the second was to consist of half-acre plots along the lake for more substantial homes; and the third was to consist of plots of approximately five acres for larger homes built along the mountain slopes on both sides of the Musconetcong River. The whole development would have encompassed 2,300 acres and included an airport, golf course and bathing beach. The development also planned for damming the Musconetcong River to increase the lake area. All of the members of the Board of Directors of the Lake Waterloo Estates Land and Development Company were Smith family and their descendents, with Seymour R. Smith being the central figure.[99] One model home was constructed; it most recently served as the office for the Foundation (referenced as the Waterloo Estate Cottage) and is located at the east end of the village.

Although the Smith family members moved from Waterloo, the property tended to remain in the hands of their descendents. Large parcels of the original purchases by General John Smith were transferred in the 1930s to the Peter Smith Corporation, which was apparently run by Sanford Smith and possibly other Smith descendents. Matilda Van Doren died in 1906, Peter D. Smith in 1918, Seymour R. Smith in 1932, and Nathan Smith in 1936.

In the 1939 WPA writers' project book, *New Jersey: A Guide to Its Present and Past,* there is the following excerpt of a description of the village:

> "…Waterloo, a slumbering hamlet with few people in its old-fashioned houses. Long a deserted

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[95] "Waterloo, New Jersey MP 51.19 (DL&W) 0 (SRR) Telegraph Call: W"; available from **http://dlw-sussexbranch.com/Stations/waterloo.html**; Internet; accessed 9 August 2008.
[96] Lee, *Images of America*, 49.
[97] Lee, *Images of America*, 49
[98] Lee, *Images of America*, 47.
[99] Lake Waterloo Estates Land and Developing Co. *Lake Waterloo Estates*, (Brochure).

> village, stranded when the iron industry went West, it lies on the north bank of the Musconetcong beside an old dam. Here was a port of the abandoned Morris Canal, which crosses the river at Waterloo. The towpath and lock remain in fair condition…
>
> Close by is the Old Stone Mill of fine workmanship in dressed fieldstone. To this mill the canal boats brought as a backload from tidewater the famous Nova Scotia stone which was ground in the mill and used as a soil sweetener in cornfields. Water still stands in the old channel and pours over the sluiceways."[100]

An updated guide to the WPA book, published in 1979, credits Percival Leach and Louis Gualandi, two young interior designers, who in 1947 "saw opportunity for exploiting the community of old houses, of which all but three belonged to the 18th and 19th centuries."[101] According to the deed documentation, Colonial Home Interiors, the company owned by Leach and Gualandi, started purchasing property at Waterloo beginning in the early 1960s. Leach's parents purchased property, apparently the Samuel T. Smith House, from the Waterloo Lake Estates in 1946, which was how Leach knew about the site.

The State of New Jersey first purchased land from Leach and Gualandi in 1964; the same year it was first open to the public. By 1969 the Waterloo Foundation for the Arts, Inc. was created to operate the village, and the property was eventually transferred from Colonial Home Interiors to the Foundation. Meanwhile the State continued to purchase property until 2001, when the State purchased the last piece of property from the Schumann's, the last private property owners. By 1977, with the State owning a majority of the property at Waterloo Village, a lease agreement was established with the Foundation that essentially gave the Foundation free reign for improving and operating the site.

The Gristmill and General Store appear to have been two of the first buildings to be restored according to an assessment made in 1964 for the State of New Jersey by Sidney M. Schwarz, an appraiser, prior to the State's purchase of the property. The Gristmill was restored again in the mid-1970s by Charles Howell; according to a website dedicated to the memory of Charles Howell, the "configuration of the gristmill is identical to the gear system at the mill at Philipsburg Manor."[102] The Modern Carriage Building was constructed in the late 1970s. The recreation of the sawmill was completed in 1981.

Unfortunately, poor management, a lack of oversight, and pervasive insolvency contributed to the closing of Waterloo Village for museum and interpretive use in 2007. Since closing, the Canal Society of New Jersey has conducted several Canal Days in the summer/fall and the State of New Jersey has made capital investments to some of the properties.

Statement of Significance under Criterion A

The exploitation of the Andover Mines and the development of the Andover Forge at Waterloo Village occurred at a time in the region when the northwestern counties of the State were being actively mined and harvested for their natural resources. Small villages developed to support such activities became more prevalent than the initial sporadic settlement of the late-17th to mid-18th centuries. Based on the available historic data, William Allen and Joseph

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[100] Federal Writers' Project of the Works Progress Administration for the State of New Jersey, *New Jersey: A Guide to its Present and Past,* (New York: Hastings House, 1939), 464.
[101] Lida Newberry, Editor, *New Jersey: A Guide to its Present and Past, New Revised Edition*, (New York: Hastings House, 1977), 484.
[102] "A Personal Tribute to and Remembrance of Charles Howell" Available on the Internet: http://www.angelfire.com/journal/millrestoration/howell.html. Accessed: 23 January 2009.

Turner exploited Andover Mine's quality hematite iron ore, and worked pig iron at their furnace in Andover and bar iron at their forge at Waterloo Village. Allen and Turner also owned extensive landholdings including acres of forest by which charcoal was created to maintain the fires at the forge and furnace. Mining operations in the region ceased for a period due to the lack of timber, as well as other economic factors, and agricultural pursuits increased due to the quantity of cleared land.

General John Smith, who may have been a resident of the region as early as 1790, began to purchase large areas of land in the early-19th century, and became one of the largest landholders in the region by 1830. The focus of his landholdings, or at least one of his focuses, was the region around the old Andover Forge, which was already a small village with a number of houses and industrial buildings. It was not until the 1830s that Smith saw his investment begin to pay off through the dual influences of the discovery of anthracite coal[103] in Pennsylvania for use in the region at the forges and furnaces, and the creation of the Morris Canal, which transported the coal and iron products between Phillipsburg and Jersey City.

The reopening of Andover Mine in 1847 was a huge economic generator in the region, and the iron ore produced at Andover helped to spur the expansion of the railroads in the mid-19th century. The Morris Canal also responded to the advances in modern technology and the need for increased cargo capacity by rebuilding the canal between 1845 and 1860. The canal contributed to the transportation of raw materials and manufactured goods during the height of its use between 1850 and 1870. The Sussex Railroad and the Morris & Essex Railroad, which operated at Waterloo Village, also helped to spur economic growth and maintain a viable community from the mid-to-late-19th century. It was during this period that Peter Smith, John Smith's youngest son, and Peter Smith's sons owned and operated the various businesses at Waterloo Village essentially making it a thriving company town.

The railroads clearly made significant technological progress over time, and ultimately outperformed the canal by reaching broader markets in less time. The rise of the railroads played a significant role in the abandonment of the Morris Canal by the State in 1924. By the late-19th century, the canal had lost much of its viability; two of its most important cargos, iron and coal, were by then being transported by the railroad, and the mining industry had begun to move to the western United States. In 1902, the railroad route had been modified; Waterloo Village was no longer a key destination, which helped to turn the village into a backwater. Peter Smith's children began to leave Waterloo Village for larger urban areas, such as Newark and Hackettstown, and only maintained their homes for summer residency or as rental properties. The loss of the Smith family by 1910 at the village, the loss of rail transportation in 1902, and the abandonment of the canal in 1924 mark the end of the period of significance for Waterloo Village under Criterion A.

Architectural Significance under Criterion C

The buildings at Waterloo Village can be broken into six separate groups. The first group consists of the 18th-century residences that were modified and/or expanded in the 19th century; these include the Homestead (S-14), the Samuel T. Smith House (S-21) and the Waterloo Hotel (S-16). The second group consists of the late-18th/early-19th-century commercial and industrial buildings, which include the General Store (S-9), the Blacksmith Shop (S-11) and the Gristmill (S-18) (which may have been the coal house during the forge era). The third group consists of those buildings constructed for the tenants and workers of the Smith family including the Waterloo Methodist Church (S-

[103] Anthracite coal was discovered in Pennsylvania in the late-18th century, but did not begin to be used in New Jersey until the early-19th century.

2), which was essentially built for the people of the village. These include the mid-19th-century stone masonry construction multi-family residential buildings, Worker Houses 1 and 2 (S-8 and S-19, respectively), and the wood frame residences, the Canal Museum (S-22), Administration Building (S-23), the Poyer House (M-34), and the Parsonage (S-3), also known as the Nathan Smith House. The fifth group consists of the late-19th-century residences, the Seymour R. and Peter D. Smith Houses (S-13 and S-20, respectively). The sixth group consists of the mid-and-late-19th-century carriage houses and barns, the Homestead Barn (S-32), and the Seymour R., Peter D. and Samuel T. Smith Carriage Houses (S-32, S-27, and S-25). Those buildings that are not listed either do not date to the period of significance, or have been so radically altered they no longer retain architectural integrity. These include the Cottage (S-26), the Administration Building, the Modern Carriage Building (S-28) and the Modern Sawmill (S-17).

Eighteenth-Century Residences

The Waterloo Hotel, Homestead and Samuel T. Smith House were originally constructed during the forge era, in two construction phases, and may have originally served as two-family residences and other uses. Each has since been modified and expanded, but their original construction utilized many aspects of vernacular Georgian architecture, including massing, plan arrangement and detailing. The period of Georgian architecture has many dates associated with its use or application, but is widely considered to be the period of 1700 to 1780. Georgian architecture was used in domestic architecture in a wide geographic expanse along the eastern seaboard from Maine to South Carolina, including New Jersey. The style apparently grew from the Italian Renaissance in response to a growing populations' desire to present their wealth and prosperity through their possessions. Much of the architecture from this period is simple and plain. The houses use typical detailing, and local building materials as applied by local craftsmen.[104] Generally, the buildings followed vernacular traditions while incorporating references from fashionable architecture of the period. These three buildings reflect typical building practices of the region in the late-18th century, and are considered to be examples of vernacular Georgian architecture.

The three buildings employ the most common form of roof-type, the side-gable. Where the original plan layout is evident, they are often typical for the period. For example, the Homestead and Waterloo Hotel employ both a single room deep plan, adjacent to a plan of two rooms deep with side hall; the rear room in the three room plan is shallower than the front room. (The original plan of the Samuel T. Smith House is less evident due to interior changes made in the early and late-19th century.) Each side contained separate entrances, and as seen at the Homestead, each probably had separate stairs to the second floor level. The layouts also place the chimneys on the outside gable walls, which permitted more open and flexible floor plan arrangements. All three building were built with useable second floors, which was also more prevalent during this period.[105] The location of the kitchen would have been either in a separate building, or in an adjoining ell. The plan is almost fully intact at the Homestead, and is still visible at the Waterloo Hotel. However, more study is required for the Samuel T. Smith House due to the 19th-century modifications.

Each of these buildings were added to and modified in the mid-or-late-19th century. The Homestead and Samuel T. Smith House were modified in the late-19th century. These modifications employed typical details of the popular Victorian architectural styles. The Italianate influences are seen at the Homestead and the first renovations of the Samuel T. Smith House. The second series of upgrades and additions to the Samuel T. Smith House were Queen Anne influenced. The Waterloo Hotel changed from a residence to a hotel. Its additions and modifications reflect the

[104] McAllester, 139 – 142.
[105] Henry Lionel Williams and Ottalie K. Williams, *Old American Houses: How to Restore, Remodel and Reproduce Them*, (New York: Bonanza Books, 1957), 74.

continuation of the vernacular based on the simplicity in the detailing of its interior and exterior.

The Homestead was expanded to the north with a kitchen addition and to the south by a wood porch, and wood two-story bay projections. The exterior employed the elements of primarily the Italianate styling and mimics its Italianate neighbor, the Seymour R. Smith House. The large porch at the front was a typical feature of late-19th-century architecture; however the detailing, bracketed supports and squared chamfered columns, are reflective of the Italianate style, popular between 1840 and 1885. In addition, the two-story bay projections provide more depth to the basic cube of the original masonry box.

The Samuel T. Smith House appears to have been one of the last buildings significantly modified in the late-19th century. These modifications appear to have been undertaken in two phases. The first phase appears to have been interior modifications of the original building and the addition of the kitchen wing. The second phase was the construction of the southwest frame addition that employed Queen Anne detailing at the exterior and Eastlake influences at the interior.

The southwest addition is distinctive on the exterior and interior, and is a good representation of the Queen Anne style with an Eastlake interior. It is interesting to note that the popular Italianate and Second Empire styles began to fall out of favor in the early-to-mid-1870s and were overtaken by the more exuberant style of the Queen Anne. There are several exterior details found on the addition that reflect the Queen Anne style. These include the ornamented gable with its use of textured siding and brackets with dropped pendants; the narrow turned posts at the all-encompassing front porch including the wheel-like brackets; and the narrow board siding with corner boards. Although an addition, the plan of Queen Anne houses were typically asymmetrical, the porches were also typically asymmetrical and often wrapped two sides of the house as seen at the Samuel T. Smith House.

Late-Eighteenth/Early-Nineteenth-Century Commercial / Industrial Buildings
The Blacksmith Shop, General Store and Gristmill at Waterloo Village are examples of form follows function. Each was constructed in response to their need to fulfill one or more specific purposes. Although symmetry, particularly at the front or primary elevations is taken into consideration, the building materials, placement of doors, interior layout and the-like create handsome functional buildings utilizing plain or limited detailing at the windows, roofline and interior finishes. At all three buildings, the use of stone for the exterior walls was in response to the readily available materials. All three buildings are fine examples of vernacular commercial buildings that have stood the test of time.

Mid-Nineteenth-Century Worker Residences
Worker Houses 1 and 2 are c. 1840[106] houses utilizing local building materials and constructed for the Smith's tenants and employees. They were constructed of stone masonry and wood framing, were simply detailed, and were designed to provide housing for multiple occupants. Their construction was in response to an increase in commercial and industrial activity in the region that drew workers to the area and created the need for multifamily dwellings. Their outward appearance is more akin to the commercial and industrial buildings on site than the residential; their detailing is simple and devoid of any particular style. The fact that they are identical in plan and elevation (except at their roofs) is an indication they were an economic necessity rather than being buildings meant to grace the landscape.

Worker Houses 1 and 2 are examples of vernacular architecture through their use of locally available materials and

[106] The c. 1840 date is based on one map reference, reflects the growth of the village during this period, particularly the latter part of the 1840s, and architectural evidence.

building techniques, and their function addressed local needs at the time. The additions to the Waterloo Hotel also fall into this category. Its expansion appears to have occurred around this time and utilizing some of the same detailing as these houses, particularly in the cooking fireplaces. The Waterloo Hotel became a hotel by 1853 in response to the growth of commerce and industry at the village. Waterloo Village also became a stop on the Morris and Essex Railroad, which provided both passenger and freight service. The village was no backwater; by the 1850s, it was a thriving, growing and prosperous community.

The Parsonage, constructed c. 1850 as a two-family residence, and the Canal Museum and Poyer House constructed c. 1860 as single-family residences are vernacular buildings constructed in response to a growing village population. Although vernacular, each building is detailed with plain wood moldings, projecting roof overhangs and porches. These three buildings, when looked at together and in the context of Worker Houses 1 and 2, represent economy-based construction over beautiful architectural design.

Late-Nineteenth-Century Residences

The next wave of prosperity occurred in the 1860s and 1870s. The height of cargo transportation at the Morris Canal was 1866. However, the increase in wealth was not limited to the canal but also the railroad, the iron industry, and the commercial and industrial enterprises that supported these activities. The Smith family benefited from these enterprises, and as seen in the architecture, either constructed new or enlarged existing buildings during this period of growth and prosperity for their own personal use.

The key element linking the Seymour R. Smith House, the Homestead, the Peter D. Smith House and the Samuel T. Smith House is the owner's embracing the fashionable architectural styles of the period. The Smiths either utilized a master builder, an architect, or pattern books, which were in wide-spread use during this period, in the design of their buildings or additions in the 1870s. This is seen in the repeated patterns of the interior and exterior detailing, and the interior layouts of the additions. This is a distinct change from the more vernacular, builder-type structures constructed prior to this time. As previously noted, the newer style influences are seen in the modifications and additions at the Homestead and the Samuel T. Smith House. The Seymour R. and Peter D. Smith Houses are new buildings. The Seymour R. Smith House is representative of the popular Italianate style while the Peter D. Smith House uses that of the Second Empire. The essence of these two styles is similar and they were popular during the same period, Italianate 1840 to 1885, and the Second Empire, 1850 to 1885.

The identifying features of the Italianate are tall, two or three story buildings often with a tower; wide overhanging eaves often decorated with brackets; tall narrow windows often decorated with pediments or other decorative elements; the windows are also often grouped; and bay projections, significant porches and paired dominant entrance doors were often prevalent. The informal Italian villa type residence was prevalent in rural and newly emerging suburban areas; these types often emphasize asymmetry, and were highly decorated (using a variety of detail on a single building). The Seymour R. Smith House epitomizes this architecture style in its exterior detailing.

The Peter D. Smith House is a fine example of the Second Empire Style and exhibits its prominent architectural characteristics including rich machine-produced ornament; the mansard roof with decorative patterned slate and dormers; deep cornices supported by decorative brackets; breaks in the façade by bay projections; and a centrally located cupola that provides fantastic views of the countryside. Buildings during this period were often designed inside out so the exterior decoration or an "all-embracing veranda" unified the bays, wings and projections containing

specific interior functions.[107]

Late Nineteenth-Century Carriage Houses
The architecture of the carriage houses constructed in the 1870s/1880s at Waterloo Village including the Seymour R, Peter D. and Samuel T. Smith Carriage Houses is specifically related to their use, in particular an increase in the application of scientific technologies in agriculture in the late-19th century. (The Homestead Barn appears to have been constructed prior to these three buildings, c. 1860, and possibly serves as the precursor type agricultural building to these later, more elaborate buildings.) The exterior architecture of these building is similar from one to the next, and overall, simple in their detailing with form, once again, following function. In each of the three buildings, the interior arrangement including feed and storage apparatus reflect a growing change in the mid-to-late-19th century in how New Jersey's farmers responded to increased competition from large expansive farms in the western parts of the United States through technology including the types of crops cultivated as well as in how the land was treated, the equipment utilized, and the technologies (brought about by the Industrial Revolution and adapted for the agricultural industry) employed.

In addition, these buildings served as the carriage house for the occupants of their respective main house. Each of these buildings are plainly detailed compared to their associated main house, but the architecture is less vernacular and more stylish as articulated in the materials used, the placement of the windows and doors, their distinctive rooflines, and the application of apparent or near symmetry.

Significance under Criterion D

The Waterloo Village Historic District today has a relatively limited above-ground expression for the Andover Forge era, both in terms of industrial buildings and the industrial landscape, and therefore the archeological resources within the village offer the best prospect of communicating the significance of this period. Likewise, the Morris Canal is present within the district chiefly in archeological form, evident in the landscape as an abandoned late 1920s engineering entity.

The district can yield important information about the layout, operations, material culture and occupation of a colonial industrial village engaged in ironworking and the Philadelphia-based domestic and transatlantic iron trade. The community played a valuable role in producing high-quality Andover bar iron for the Continental Army during the American Revolution, an involvement that will be reflected in the archeological record in the remains of the forge, coal house, blacksmith shop/magazine, other industrial buildings, related cultural deposits and industrial waste. Archeological data associated with 18th-century houses and house sites will provide information on the material culture, status and lifeways of the managers, workers, slaves and their families.

Superimposed over the archeology of Andover Forge and the surrounding landscape are buildings, structures and substantial physical remains of the Morris Canal, the Sussex Railroad, the 19th/early 20th-century village of Waterloo and the Waterloo Ice Company facility. The district contains the best preserved and most informative inclined plane of the 23 such structures on the Morris Canal. This feature, an engineering construct of national and international importance, and other elements of the canal and railroad, all largely archeological in nature, reinforce the value of the district as an exemplar of the transportation revolution of the early/mid-19th century. The village of Waterloo, in addition to its strong architectural presence in the landscape, maintains an archeological component in the form of

[107] Henry Lionel Williams and Ottalie K. Williams, *A Guide to Old American Houses 1700 – 1900*, (Cranbury, New Jersey: A.S. Barnes and Co., Inc., 1962), 115.

sites of former buildings, cultural deposits and material culture that will provide information on the lives of the village's inhabitants and local commerce during the 19th and early 20th centuries. The archeology of the Waterloo Ice Company plant located just outside the village can yield valuable information on the design and operation of a major rural ice-making business active in the immediate pre-refrigeration era from the late 1880s until World War I.

Archeological Context

No formal archeological investigations have been conducted on the sites of 18th-century resources within the industrial community of Andover Forge. Artifacts on the ground surface and strong anecdotal information suggest that the forge site still holds considerable archeological potential despite the construction and reconstruction of a sawmill on the same site (in the 1830s and circa 1980 respectively). The cultural landscape analysis presented in Section 7 of this nomination further supports the likelihood of rich archeological deposits surviving throughout the 18th-century industrial core of the village beneath 19th-century fill and structures, as well as on the sites of several 18th-century dwellings and outbuildings.

Archeological study of colonial and Revolutionary War-era iron working sites in the New Jersey Highlands has taken place intermittently over the past half century and has involved numerous surveys of surface remains and a small number of excavations. Much of this work, carried out by prominent industrial archeologists such as Roland Robbins and Edward Rutsch, has focused on blast furnace sites (e.g., Ringwood, Long Pond),[108] and relatively little attention has been given to forge locations. Within the context of colonial and Revolutionary War-era forges, bloomeries have tended to receive more analysis than finery and chafery forges, as witnessed by investigations at the Lower Longwood Forge, Windham Forge and the Leddell Forge.[109] Andover Forge, a finery and chafery forge that was in operation from 1760 until the mid-1790s, is representative of an important class of ironworking facility in the New Jersey Highlands. It played a key role in the regional iron processing industry and produced substantial quantities of high-quality Andover bar iron both for export to England and for use by American blacksmiths and metalworkers.[110]

The one finery and chafery forge site in northern New Jersey to have been studied in some detail by archeologists, and an excellent comparative resource for Andover Forge, is the Charlotteburg Middle Forge, built in the late 1760s on the Pompton River in Passaic County. This site was investigated in the early to mid-1960s by Edward Lenik.[111]

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[108] For an overview of Roland Robbins' life and work, see: Linebaugh, Donald W., *The Man Who Found Thoreau* (University of New Hampshire Press, Durham, New Hampshire, 2005). For Long Pond Ironworks, see Rutsch, Edward S. and Brian H. Morrell, An Industrial Archaeological Survey of the Long Pond Ironworks, West Milford Township, Passaic County, New Jersey. *IA: The Journal of the Society for Industrial Archeology* 18 (1, 2), pp. 40-60 (1992).

[109] Lenik, Edward J., The Rediscovery of Lower Longwood Forge. *Bulletin of the Archaeological Society of New Jersey* 26, pp. 12-21 (1970); Sellmer, George P., Windham Forge Revisited. *The North Jersey Highlander*, Volume XX (72), pp. 3-33; Veit, Richard and Michael Gall, Forging Ahead in the Somerset Hills: Archaeological Documentation of an 18th-Century Bloomery Forge in Bernardsville, New Jersey. *Northeast Historical Archaeology* 37 (1), pp. 38-57.

[110] For general background on the northern New Jersey iron industry, see: Boyer, Charles S., *Early Forges and Furnaces in New Jersey* (University of Pennsylvania Press, Philadelphia, Pennsylvania, 1931); Ransom, James M., *Vanishing Ironworks of the Ramapos* (Rutgers University Press, New Brunswick, New Jersey, 1966); Wacker, Peter O., *The Musconetcong Valley of New Jersey* (Rutgers University Press, New Brunswick, New Jersey, 1968); Mulholland, James A., *A History of Metals in Colonial America* (University of Alabama Press, University, Alabama, 1981); Gordon, Robert, *American Iron, 1607-1900* (The John Hopkins University Press, Baltimore, Maryland and London, England, 1996); Bezís-Selfa, John, *Forging America: Ironworkers, Adventurers, and the Industrious Revolution* (Cornell University Press, Ithaca, New York and London, England, 2004).

[111] Lenik, Edward J., Charlotteburg Middle Forge. *Bulletin of the Archaeological Society of New Jersey* 30, pp. 7-10; Malone, Frank D., A Reconstruction of Charlotteburg Middle Forge. *The North Jersey Highlander*, Volume III (8), pp. 3-20.

The Charlotteburg and Andover forges both contained four hearths (two each for finery and chafery work) and multiple wheels for operating trip-hammers and bellows, and the design of both facilities appears to have been strongly influenced by the most up-to-date forge building technology developed in England by John Smeaton. Andover Forge was one of the two key facilities in the Allen and Turner iron mining and processing enterprise known as the Andover Ironworks. The Andover Ironworks was the second of Allen and Turner's two principal ironworking complexes in northern New Jersey, established a few years after the Union Ironworks and set deeper into the frontier in the midst of the French and Indian War. The Charlotteburg furnace and forges, founded by Peter Hasenclever for the American Company, rivals of Allen and Turner, were likewise a second generation ironworks set up in the wake of the Ringwood Ironworks a few years after the Andover operations.[112]

The Union and Andover ironworking complexes of Allen and Turner and the Ringwood, Charlotteburg and Long Pond facilities of the American Company all lie within the eastern part of the Piedmont iron-making zone defined by Robert Gordon.[113] This zone extended west across southeast Pennsylvania to the Susquehanna River and was the most productive of the charcoal-fueled iron making areas in the American colonies. It included many of the best known colonial furnaces and forges in the Mid-Atlantic region which collectively churned out vast amounts of pig iron and bar iron for export to Britain, in the process enriching many Philadelphia merchants and their London counterparts. British regulation of the iron making industry, in large part undertaken to protect British metalworkers and perpetuate the colonial mercantilist system, ultimately helped trigger the America Revolution. Andover, with its wealthy Loyalist Philadelphia merchant owners, was taken over by the Continental Congress and, like most other furnaces and forges in the New Jersey Highlands, shifted its production to support the American cause.

Archeological study of the mid-19th-century transportation features at Waterloo Village has mostly taken the form of visual and cartographic analysis of the many well preserved surface remains in the cultural landscape. Limited archeological observation and machine-assisted excavation was undertaken at the guard lock, Lock 3 West, on the Morris Canal on the north bank of the Musconetcong River and in the river bed at the foot of the inclined plane, but this work was never formally documented or reported. Despite the lack of archeological excavation along the Morris Canal and Sussex Railroad corridors, the extensive surface remains indicate a high level of archeological integrity and there can be no doubt that the subsurface aspect of these transportation features has considerable potential to yield important historical information. This is particularly the case with Inclined Plane 4 West and its associated structures and the guard lock on the Morris Canal, and with the rail bed, embankments and cuts, sidings, bridges and culverts of the Sussex Railroad. The archeological expression of the original and short-lived Sussex Mine Railroad is likely to be much weaker owing to its brief period of operation and the effects of 20th-century land alteration along parts of its alignment.

The Morris Canal, with its exceptional system of planes and other important engineering features such as aqueducts, lift-locks and tide locks, has been the subject of numerous historical and archeological surveys over the years. A few have addressed the entire alignment or extended lengths of the canal,[114] but more often these studies have been site-specific and conducted in conjunction with assessments of environmental impacts on limited sections or particular

[112] Boyer, op. cit., pp. 12-34, 233-243.
[113] Gordon, op, cit., p. 59.
[114] Lee, James, *The Morris Canal: A Photographic History* (Delaware Press, Easton, Pennsylvania, 1979); Lefferts, H. Leedom and David R. Peifer, *Northwest New Jersey: An Inventory and History of Historic Engineering and Industry* (U.S. Department of the Interior, Heritage Conservation and Recreation Service, Office of Archeology and Historic Preservation, Washington DC, 1979), pp. 52-89; Morrell, Brian H., *Historic Preservation Survey of the Morris Canal in Warren County*, New Jersey (Warren County Morris Canal Committee, Warren County, New Jersey, 1987).

features of the canal. Over the years, six of the canal's inclined planes have been the subject of archeological investigation, but these studies have been fairly limited in focus and, with the exception of avocational work done at Inclined Plane 9 West in 1971, have not involved extensive excavation.[115] From the standpoint of archeological potential, none of the inclined planes so far subjected to archeological study compare in caliber to Inclined Plane 4 West, which is unquestionably the most intact of the Morris Canal's planes. Locks have received more comprehensive archeological inquiry, notably Locks 2 East and 4 West, which have both been excavated in recent years.[116] The guard lock at Waterloo Village, Lock 3 West, is unique in being part masonry lock and part aqueduct, and for this reason is judged to be of particular archeological interest. The observations made in 1990 (described in Section 7) confirmed the archeological integrity and value of this lock.

Although not unique in its use of the inclined plane, the Morris Canal made far greater application than any other waterway in the world of this innovative method of raising and lowering boats between different canal elevations. Along its 102-mile length, there were 23 inclines, 11 of them helping to address the 760-foot drop from the summit level at Lake Hopatcong to the Delaware River at Phillipsburg, and 12 assisting with the 914-foot drop to the Passaic River at Newark. This represents by far the greatest number of inclines on a single canal.[117]

In North America, one earlier inclined plane was in use briefly from the early 1790s until around 1805 on the South Hadley Canal in Connecticut. This plane provided a 53-foot lift and was soon replaced by a lock. In the mid-1830s two railroads in Pennsylvania, the Columbia & Philadelphia, which connected the Susquehanna and Delaware Valleys, and the Allegheny Portage Railway, which linked Holidaysburg on the Juniata River with Johnstown on the Connemaugh, both employed inclined planes. The former railroad had two inclines, one at either end of the alignment; the latter made use of ten inclines varying in length from 1,500 to 3,100 and were abandoned in 1855. Another single inclined plane was constructed on the Chesapeake & Ohio Canal at Georgetown, just outside Washington, DC, in 1876. This 600-foot-long incline, which raised and lowered boats 40 feet between the Potomac River and the canal, was only operational for 13 years. The Morris Canal served as the model for a pair of inclined

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[115] Hunter Research, Inc., "Archaeological Investigations, Lock Street Bridge Replacement, Lopatcong Township and Town of Phillipsburg, Warren County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1992; Hunter Research, Inc., "Archaeological Data Recovery Lock Street Bridge Replacement Lopatcong Township and Town of Phillipsburg Warren County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 1993; Githens, Herbert J., "Inclined Plane 9 Historic Site Master Plan," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 2002; Hunter Research, Inc. "Archaeological Monitoring, Morris Canal Inclined Plane 2 East, Roxbury Township, Morris County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 2007; Hunter Research, Inc., "Archaeological Monitoring, Morris Canal Plane 2 East, Roxbury Township, Morris County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 2011; Hunter Research, Inc., "Archaeological and Structural Conditions Assessment, Morris Canal Plane 10 West, Lopatcong Township, Warren County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 2012.

[116] Hunter Research, Inc., "Archaeological Investigations and Management Plan, Morris Canal Lock 2 East, Wharton Borough, Morris County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 2007; Hunter Research, Inc., "Archaeological Investigations and Management Recommendations, Morris Canal Locks 4 and 5 West, Allamuchy Township, Warren County, New Jersey," Report on file, New Jersey Historic Preservation Office (NJDEP), Trenton, New Jersey, 2010.

[117] Tew, David, *Canal Inclines and Lifts* (Alan Sutton Publishing Limited, Gloucester, England), pp. 28-33; Uhlemann, Hans-Joachim, *Canal Lifts and Inclines of the World* (Internat, Horsham, England, 2002), pp. 40-46. Kapsch, Robert J., *Canals* (W.W. Norton & Company, New York and London, England, 2004), pp. 169-229.

planes on the Shubenacadie Canal in Nova Scotia, built between 1854 and 1861. Finally, the Trent-Severn Waterway, which linked Trenton on Lake Ontario with Port Severn in Georgian Bay on Lake Huron, put two inclines into service in 1920. These represent the sum total of inclined planes in North America.

The Morris Canal is also unmatched among the many canals that made use of inclined planes in Europe and Asia. Indeed, the well known Elblanski Canal near Gdansk in Poland, where the world's oldest working inclines are still in operation, employed engineering designs that were modeled closely on those used for the Morris Canal. This series of five inclines raises the waterway 326 feet. While the technology developed for the Morris Canal's inclines drew heavily on examples in Britain, none of the British canals made as extensive use of inclines as the Morris Canal. When viewed in terms of their number, the scale of their implementation, the volume of their usage and their total years in operation, the inclined planes of the Morris Canal are without parallel worldwide. Within this context the archeological remains of Inclined Plane 4 West and its associated features (especially the powerhouse, raceways and plane tender's house) are of international significance and hold immense potential to yield important historical and physical information about the design, modification and use of this remarkable type of engineering structure. Specifically, around 1850, as part of a canal-wide upgrade, the 30-foot-diameter timber waterwheel that powered the cable system at Inclined Plane 4 West was replaced by a water-powered reaction turbine. Surface remains suggest that the archeological record at the site will provide information on both the original pre-1850 waterwheel and the later post-1850 water turbine operation used at the incline.

The railroad network of northwestern New Jersey evolved rapidly over the period of 1850-1885, at first stimulated largely by the need to move raw materials (iron ore from the New Jersey Highlands and anthracite coal from the Lehigh Valley) from the hilly interior to the emerging factory towns ranged along the eastern seaboard. As time went on and the network developed, traffic expanded to include other manufactures, agricultural produce and passengers. Chartered in 1848 by Cooper and Hewitt and opened in 1851, the Sussex Mine Railroad at first made use of mules and horses to haul iron ore from the Andover mines to the Morris Canal at Waterloo. This relatively primitive thoroughfare was the first of the true iron-mining railroads in northern New Jersey. In 1853-54, the Sussex Mine Railroad was converted to steam, extended north to Newton and rebuilt in the Waterloo area to follow the south bank of the Musconetcong River and connect to the Morris and Essex Railroad. From this time onward the line became known as the Sussex Railroad.[118] For a brief period in the mid-1850s, the Sussex Railroad transshipped iron ore on to the Morris Canal at Waterloo, but soon after, with the connection with the Morris and Essex in place, all of this commodity was carried by rail.

The Sussex Mine Railroad and the Sussex Railroad played a key role in the development of Cooper and Hewitt's evolving iron and steel empire that hinged initially on the mining of high-quality magnetite in the Andover area and the movement of this ore to blast furnaces in Phillipsburg and then ultimately in bar form to the rolling mills and wire mills of Trenton. The various Cooper and Hewitt enterprises, notably the Trenton Iron Company and the New Jersey Steel and Iron Company, were at the forefront of the American Industrial Revolution in the third quarter of the 19th century, and Andover iron passing through Waterloo was eventually processed into newly developed metal products such as iron rails, wire rope and structural iron and steel, key ingredients in the expansion of the nation's railroad network and manufacturing sector. At Waterloo, archeological traces of the Sussex Mine Railroad, most likely to survive along the canal bank and only intermittently along the rail alignment, and the much more substantial remnants of the Sussex Railroad on the south side of the Musconetcong River, especially in the area of the mid-1850s

[118] Lefferts and Peifer, op. cit, pp. 90-155; Lowenthal, Larry, *Iron Mine Railroads of Northern New Jersey* (The Tri-State Railway Historical Society, Dover, New Jersey, 1981), pp. 63-64; Lowenthal, Larry and William T. Greenberg, Jr., *The Lackawanna Railroad in Northwest New Jersey* (The Tri-State Railway Historical Society, Morristown, New Jersey, 1987), pp. 127-155.

ore docks and around Inclined Plane 4 West, are a valuable reminder of how seemingly minor rural transportation features were actually critical arteries for industrial and urban development throughout the country.

No significant effort has been directed at the archeological study of the 19th- and early 20th-century village of Waterloo, either toward its several residences or toward the mills or store. Archeological information undoubtedly survives below ground relating to the various buildings, outbuildings and related structures in the village, while artifacts and other cultural materials will exist below ground in shaft features (wells, privies, cisterns and pits) and in midden deposits. The archeology of the 19th- and 20th-century village fits within the broader realm of rural Morris Canal-based settlements in the New Jersey Highlands where one prominent family, in this case the Smiths, controlled local commerce and industry. The archeological signature of this settlement and its material culture will offer a marked contrast to that supplied by the larger "ports" and urban centers along the course of the canal.

The remains of the Waterloo Ice Company plant on the south bank of the Musconetcong River upstream from Waterloo Village are well preserved, consisting of the concrete footings of the immense ice houses, traces of the power and rail infrastructure and the shell of a terra-cotta residence/office, all set within a valley-bottom landscape of abandoned ice ponds. No formal archeological investigations have been undertaken at the site, but mapping of surface remains supplemented with clearing of vegetation and minimal excavation would establish its integrity and potential to yield significant information about the ice industry. These remains are representative and evocative of a typical late 19th- and early 20th-century commercial ice business harvesting and selling ice both locally and into a regional market based around the New York/northern New Jersey metropolitan area. The remains reflect a limited period of operation from the late 1880s until World War I, during which the ice industry reached peak levels of production and then went into rapid decline in the face of rising water pollution and competition from steam-driven ice-making machinery that was not locationally governed by the need for ice ponds.[119] The Waterloo Ice Company facility is of somewhat larger capacity than – but similar in style and period of operation to – the recently National Register-designated Princeton Ice Company/Mountain Lakes Preserve located just to the north of Princeton in Mercer County.[120] Both plants were identified with locally prominent families, the Smiths in the case of the Waterloo Ice Company and the Margerums in the case of the Princeton Ice Company. The archeology of these two sites will bear useful comparison in terms of their physical layout, mode of construction and level of technology.

Categories of Archeological Information

The main categories of archeological information for the 18th-century industrial village of Andover Forge are: spatial and cultural landscape data reflecting the layout and operation of the industrial and residential sectors of the village (e.g., roads, waterways, topography); structural remains of industrial buildings and related waterpower and infrastructure features; structural remains of houses and outbuildings; cultural deposits and middens reflecting industrial activity and domestic occupation; industrial raw materials, products and waste; and objects of material culture. More specifically, industrial remains are likely to consist of the following: the foundations and footings of the forge, coal house, grist and sawmills, blacksmith shop/magazine, wheelwright shop, outbuildings, dams and raceways; ironworking and milling tools and machinery; iron products (notably pig iron and bar iron, although these are rarely found on industrial sites owing to their market value); and fuel and industrial waste (charcoal and iron slag). Domestic remains are likely to consist of: the foundations and footings of dwelling houses and outbuildings such as barns, smoke houses and springhouses; "shaft" features such as wells, cisterns, privies and refuse pits; postholes reflecting fence lines and the outlines of small frame outbuildings that were not erected on foundations; garden soils,

[119] Weightman, Gavin, *The Frozen Water Trade* (Hyperion, New York, 2003).
[120] Ashton, Charles, with Wanda Gunning, Princeton Ice Company/Mountain Lakes Preserve National Register of Historic Places Registration Form. On file, National Register of Historic Places, U.S. Department of the Interior, Washington, DC, 2006.

flower beds, and pathway and yard surfaces; and accumulations of domestic and food waste.

The main categories of archeological information for the 19th-century transportation features are: the prism and towpath of the Morris Canal; elements of the guard lock, Lock 3 West (walls, gates, abutments, aqueduct); the slackwater dam across the Musconetcong; elements of Inclined Plane 4 West (the bed and track, cable drums and cabling; powerhouses and waterpower systems; the plane tender's house, outbuildings and related domestic deposits and artifacts); elements of the Sussex Mine Railroad and Sussex Railroad (rail beds, sidings, embankments, bridge abutments, ore bins and ore chutes); and features of the 19th-century local road network (road beds, bridges and bridge abutments).

The main categories of archeological information for 19th- and early 20th-century Waterloo Village are broadly similar to those identified for the 18th-century community of Andover Forge. While no large-scale ironworking took place during this era, industrial activity continued in the relocated gristmill and sawmill, respectively on the sites of the earlier coal house and forge, and also at the blacksmith shop (on or close to the site of the 18th-century gristmill and sawmill). Key categories of industrial archeological information will again include building foundations, waterpower features, milling and smithing tools, and mill machinery. Insofar as the 19th- and early 20th-century residential component of the village is concerned, the same range of domestic building and structural remains, cultural deposits and artifacts applies. More specific to the later village are the commercial and community sites, notably the General Store, the Waterloo Hotel and Waterloo Methodist Church, which will each offer their own unique archaeological signatures in terms of buried features and material culture objects.

The main categories of archeological information for the late 19th/early 20th-century ice making complex are: the remains of the ice houses, powerhouses, conveyors and rail sidings; and the substantial remnants of the terra-cotta Waterloo Ice Company house/office. Fuel waste is anticipated around the ice-making complex and some domestic debris may be expected around the house/office, but otherwise the artifact yield is likely to be minimal. The ice ponds, however, should they ever be drained, are likely to contain ice harvesting tools and other objects and equipment dropped into the water, which may be revealing about the techniques used for cutting and moving ice into the lakeside storage buildings.

Research Questions
Archeological remains within the Waterloo Village Historic District have the ability to shed light on several facets of colonial, Revolutionary War and 19th- and early 20th-century industrial, rural, social and environmental history. In some instances, archeological inquiry may entail analysis of the natural and cultural landscape and archeological evidence that is visible at the ground surface; in others, it is the subsurface record, in the form of buried architectural and structural remains, artifacts and other items of material culture, that provide the means for answering a variety of research questions. Understanding the full breadth and depth of archeology in the district is crucial to explaining the present-day "natural" appearance of this section of the Musconetcong Valley, which differs dramatically from how it would have looked in the mid-18th century prior to European settlement.

In terms of the late colonial industrial history of the Mid-Atlantic region, much may still be learned about the mining and processing of iron ore, the various stages of iron and steel production, and the marketing of semi-processed and fully fabricated metal goods. Andover Forge filled a key role in this system that was largely orchestrated by wealthy merchants in Philadelphia, New York and London. The archeology of the core industrial portion of the Andover Forge site, by providing data on the overall design and layout of the forge and on its products and waste, can inform us about the level of ironworking technology in use and production processes.

The extent to which these aspects of colonial ironworking drew directly on metallurgical practice and knowledge in England is of extreme interest to industrial and economic historians. How much, for example, was the operation of Andover Forge rooted in discursive technology brought across the Atlantic by migrating ironworkers and how much was it governed by formal designs developed by the emergent engineering class and transmitted through contact within the wealthy, educated British and American merchant elite? From Allen and Turner's contact with British agents and ironworkers it is suspected that the Andover Forge operations were modeled closely after British facilities using designs developed by well-known British engineers such as John Smeaton. Industrial archeological study of the buildings and structural remains at Andover Forge offers an opportunity to consider this British technological influence in detail. Analysis of archaeologically recovered forge-related waste (charcoal, ash and, particularly, slag) can help answer metallurgical questions concerning the forge's production and technological competence. In the residential sector of the community, archeological investigation of the colonial houses and house sites will generate material culture information that will allow for comparative analysis of the lifestyles of ironmasters, ironworkers and slaves on the New Jersey Highlands frontier.

The Revolutionary War-era operation of Andover Forge is minimally understood. The level and type of production at the site once it was taken out of its Loyalist owners' hands and put to work for the American cause remain unclear. It will be difficult to distinguish between late colonial, Revolutionary War and early federal production, since in each case the main product will have been bar iron. However, archeology may still yield revealing material culture evidence of the occupation of the forge and associated village during the Revolution (e.g., weapons, ammunition, military artifacts). References to a blacksmith shop/magazine in 1782 are tantalizing and it is uncertain if the existence of the magazine is related to the need for defense against Indians on the frontier or to the village's military focus during the Revolution. Archeology may offer an opportunity to clarify this issue.

A major episode of cultural landscape reconfiguration occurred in the 1830s with the coming of the Morris Canal. Essentially, the building of the canal resulted in the burial and submergence of much of the earlier 18th-century industrial zone, the relocation of the grist and sawmill, reconstruction of the mills' waterpower system and a general raising of grades along the north bank of the Musconetcong. Several new buildings were erected along both sides of what is today Waterloo Village Road. The details of this radical landscape change, much of it related to the conflict over the water needs of the canal and the mills, are poorly understood and archeology is the primary means for clarifying the main elements of the 18th-century and 19th-century waterpower systems (e.g., the locations of the dams and raceways; the fall and elevations at the various wheel pits; the extent of the millponds). The conflict between new canals and pre-existing water-powered mills is a notable phenomenon of the early 19th-century transportation revolution, evident in New Jersey along both the Morris and Delaware and Raritan Canals (and along many other American canal routes as well). The archeology and historical geography of the Waterloo Village Historic District will permit a thorough examination of this issue on a site-specific basis.

Also within the context of the American transportation revolution of the early 19th century, the archeology of the district has the means to provide considerable new information about the design and technology of inclined planes on the Morris Canal. As the best-preserved incline, Inclined Plane 4 West holds a wealth of engineering and technological information about 19th-century canal building. One key area of inquiry about the incline where archeology can be of assistance concerns the transition from the original early 1830s waterwheel-powered cable system to the more advanced early 1850s water turbine-powered system. How was this transition achieved? How did the two systems differ in terms of design, layout and power capacity? Archeological remnants of both systems survive at the site and offer an unparalleled opportunity for engineering analysis. Other critical areas where archeological data relating to transportation topics are expected to be especially revealing include: the unique guard lock, Lock 3 West, with its aqueduct; the canal-side ore transshipment facilities at the terminus of the Sussex Mine

Railroad; the river-side ore transshipment facilities on the Sussex Railroad siding on the south bank of the Musconetcong; and the crossing of the Sussex Railroad over Inclined Plane 4 West.

The Waterloo Village Historic District contains numerous discrete residential properties, many still with significant extant historic buildings. The archeology of these properties, and of other destroyed house sites, will enable a detailed and informative comparison of the 18th-century industrial village with the 19th-century commercial and transportation hub into which this community is later transformed. Building types, building footprints, the spatial distribution of buildings within properties, material culture assemblages – these can all be studied to good effect archeologically and will help to define the social and economic character of Andover Forge and Waterloo Village.

The Waterloo Ice Company plant represents a relatively self-contained archeological resource set apart from Andover Forge/Waterloo and confined to a limited 30-year period of operation during a time when the village and canal were well into their declining years. The ice harvesting business, however, had an immense effect on the environmental history of this section of the Musconetcong Valley, further submerging extensive acreage upstream from the village and necessitating modification of the hydropower system for the 19th-century mill complex. The archeology of the ice-making plant and the associated landscape of dam, ponds and channels, along with artifacts likely to exist submerged on the valley floor and around the plant, have the ability to provide important information on the technology and operation of a short-lived rural industry whose production was keyed to regional urban centers, notably New York City and the towns of northern New Jersey.

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United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Waterloo Village (Boundary Increase #1)
Name of Property
Sussex County, New Jersey
County and State
Name of multiple listing (if applicable)

Section number 10 Page 1

Verbal Boundary Description

The original district boundary begins at the intersection of the start of the grade of Interstate Route 80 and the Musconetcong River and proceeds east along river about 2900 feet to the intersection of Waterloo Road and Homestead Drive. It then proceeds westerly along Waterloo Road to Route I-80 and continuing southeast to the point of beginning. The boundary increase begins at the same point of beginning and proceeds east along the Musconetcong River to the intersection Homestead Drive and Waterloo Road before proceeding east along Waterloo Road toward the intersection of Waterloo Road with the Sussex Railroad road bed. At this point, the boundary continues southwest along the road bed until the intersection with Route I-80 and proceeds northwest ending at start of the grade of Interstate Route 80 and the Musconetcong River.

Boundary Justification

The boundaries were chosen to include the north and south sides of Waterloo Village encompassing properties in both Morris and Sussex Counties associated with the history and development of the village encompassing both above-ground and below-ground cultural resources. The boundary increase in particular incorporates the features of the Inclined Plane 4 West including a portion of the canal heading south, the remains of the Waterloo Ice Company, and the remains of the Sussex Railroad including sidings, a large section of the road bed, the abutments for the sections of the railroad that passed over the inclined plane and roadway.

Latitude/Longitude Coordinates

A. 40.915878, -74.764907
B. 40.916958, -74.763278
C. 40.916243, -74.759796
D. 40.918496, -74.751189
E. 40.920336, -74.747514
F. 40.920886, -74,740099
G. 40.917018, -74.743582
H. 40.914957, -74.748391
I. 40.912529, -74750219
J. 40.912146, -74.756068
K. 40.913519, -74.760098

Map Datum: WGS84

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Waterloo Village (Boundary Increase #1)
Name of Property
Sussex County, New Jersey
County and State
Name of multiple listing (if applicable)

Section number Photo Log Page 1

Name of Property: Waterloo Village

City or Vicinity: Byram Township and Mount Olive Township

County: Sussex and Morris State: New Jersey

Description of Photograph(s) and number:

Historic Images:
Waterloo Village_Historic Image_0001
Overall view of Waterloo Village looking northeast from the Morris County side of the Village.
Credit: Waterloo Foundation for the Arts, Inc. *Waterloo: A National Historic Site in Allamuchy Mountain State Park; A History of Waterloo*. Pamphlet. Publication date unknown.

Waterloo Village_Historic Image_0002
View of Lock 3 West looking west toward the Canal Store.
Credit: James Lee, *The Morris Canal: A Photographic History* (Bethlehem, PA: Lehigh Litho, 1979).

Waterloo Village_Historic Image_0003
View of Inclined Plane 4 West taken from the Sussex County side looking southeast.
Credit: Robert R. Goller, *Images of America: The Morris Canal; Across New Jersey by Water and Rail* (Charleston, SC: Arcadia Publishing, 1999).

Waterloo Village_Historic Image_0004
View of the General Store looking northwest at the south and east elevations; note the relationship of the store to the Morris Canal.
Credit: Canal Society of New Jersey.

Waterloo Village_Historic Image_0005
Overall view looking west along the Morris Canal with the lock, aqueduct and mill race in the foreground. Note the relationship of all the components to the canal prism.
Credit: James Lee, *The Morris Canal: A Photographic History* (Bethlehem, PA: Lehigh Litho, 1979).

Waterloo Village_Historic Image_0006
Late-19th-century view of the Gristmill and Sawmill looking east. Note the relationship of the mill races below each building and the simplicity of the architecture.
Credit: Collection of the State of New Jersey

Waterloo Village_Historic Image_0007
Late 19th-century view of the Peter D. Smith House looking northeast at the south and west elevations. This building is a fine example of the Second Empire style.
Credit: Collection of the State of New Jersey.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Waterloo Village (Boundary Increase #1)
Name of Property
Sussex County, New Jersey
County and State
Name of multiple listing (if applicable)

Section number Photo Log Page 2

Present-Day Images:

NJ_Sussex County_Waterloo Village _0001
View of the Waterloo United Methodist Church looking northwest at the south (front) and east elevations.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: March 16, 2008

NJ_ Sussex County_Waterloo Village_0002
View looking northeast at the front (south) elevation of the Meeting House.
Photographer: Thomas B. Connolly, AIA
Date Photographed: March 26, 2013

NJ_ Sussex County_Waterloo Village_0003
View looking north at the south (front) façade of Worker House 1.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 2, 2008

NJ_ Sussex County_Waterloo Village_0004
View of the General Store looking southwest at the north (street front) and east elevations.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 2, 2008

NJ_ Sussex County_Waterloo Village_0005
View of the Blacksmith Shop looking west at the front (east) elevation.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 2, 2008

NJ_ Sussex County_Waterloo Village_0006
View of the Seymour R. Smith House looking north at the south elevation.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 2, 2008

NJ_ Sussex County_Waterloo Village_0007
View of the Smith Homestead looking north at the south (front) elevation.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 2, 2008

NJ_ Sussex County_Waterloo Village_0008
View of the Waterloo Hotel looking north at the south elevation.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 2, 2008

NJ_ Sussex County_Waterloo Village_0009
View of the Grist Mill (coal house) looking south at the north (front) elevation.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 2, 2008

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Waterloo Village (Boundary Increase #1)
Name of Property
Sussex County, New Jersey
County and State
Name of multiple listing (if applicable)

Section number Photo Log Page 3

NJ_ Sussex County_Waterloo Village_0010
View of the Peter D. Smith House looking northwest at the south (front) and east elevations.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 17, 2008

NJ_ Sussex County_Waterloo Village_0011
View of the Samuel T. Smith House looking northeast at the west and south elevations of primarily the late-19th-century Queen Anne addition with the 18th-century portion of the house attached at its north side.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 16, 2008

NJ_ Sussex County_Waterloo Village_0012
View of the Samuel T. Smith Carriage House looking northeast at the west and south elevations.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: February 18, 2008

NJ_ Sussex County_Waterloo Village_0013
View of the Peter D. Smith Carriage House looking north at the south elevation.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: March 26, 2008

NJ_ Sussex County_Waterloo Village_0014
View of the Rutan Cabin looking northwest at the east (front) elevation.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: March 1, 2008

NJ_ Sussex County_Waterloo Village_0015
View of the Homestead Barn looking northwest at the south and east elevations.
Photographer: Margaret M. Hickey, R.A.
Date Photographed: March 15, 2008

NJ_Morris County_Waterloo Village_0016
View of the Inclined Plane 4 West looking south up the plane showing the stone retaining walls.
Photographer: Patrick Harshbarger
Date Photographed: March 15, 2013

NJ_Morris County_Waterloo Village_0017
View of the Powerhouse foundation and the opening to the turbine looking southwest.
Photographer: Patrick Harshbarger
Date Photographed: March 15, 2013

NJ_Morris County_Waterloo Village_0018
Detailed view of the Powerhouse foundation and the opening to the turbine looking east.
Photographer: Patrick Harshbarger
Date Photographed: March 15, 2013

NJ_Morris County_Waterloo Village_0019
View of the foundation of the Plane Tender's House looking east.
Photographer: Patrick Harshbarger
Date Photographed: March 15, 2013

NJ_Morris County_Waterloo Village_0020
View of the Sussex Railroad Abutment that crossed Inclined Plane 4 West.
Photographer: Patrick Harshbarger
Date Photographed: March 15, 2013

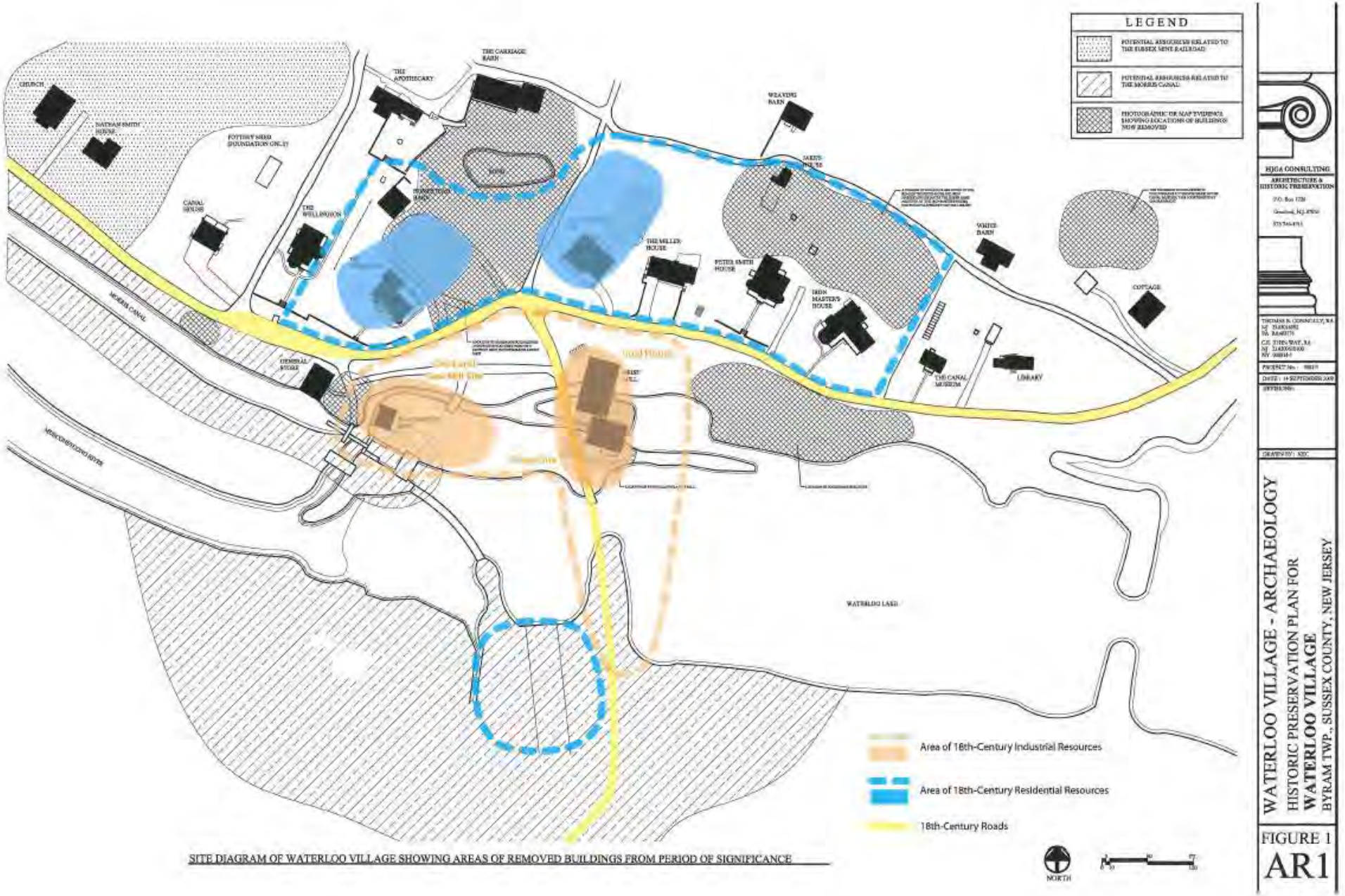
NJ_Morris County_Waterloo Village_0021
View of the Sussex Railroad Bed looking west.
Photographer: Patrick Harshbarger
Date Photographed: March 15, 2013

NJ_Morris County_Waterloo Village_0022
View of the Waterloo Ice Company foundations looking northwest.
Photographer: James Lee, III
Date Photographed: December 28, 2012

NJ_Morris County_Waterloo Village_0023
View of the Waterloo Ice Company House looking east at the west elevation of the former office/residence.
Photographer: Patrick Harshbarger
Date Photographed: March 15, 2013

NJ_ Sussex County_Waterloo Village_0024
View of the canal prism and tow path of the Morris Canal looking northeast with the General Store beyond.
Photographer: Margaret M. Hickey
Date Photographed: March 16, 2008

Google Earth Location Map



SITE DIAGRAM OF WATERLOO VILLAGE SHOWING AREAS OF REMOVED BUILDINGS FROM PERIOD OF SIGNIFICANCE

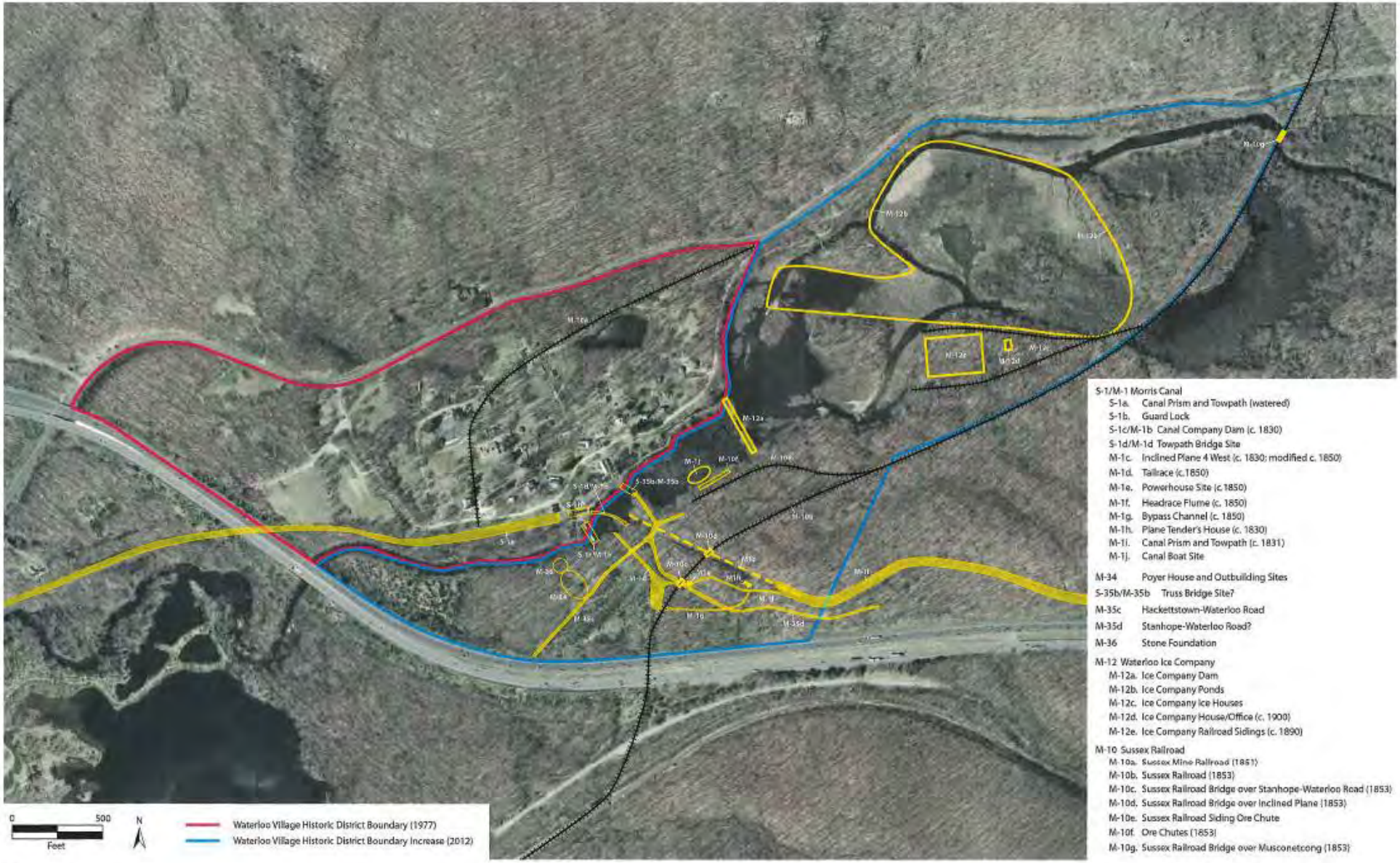
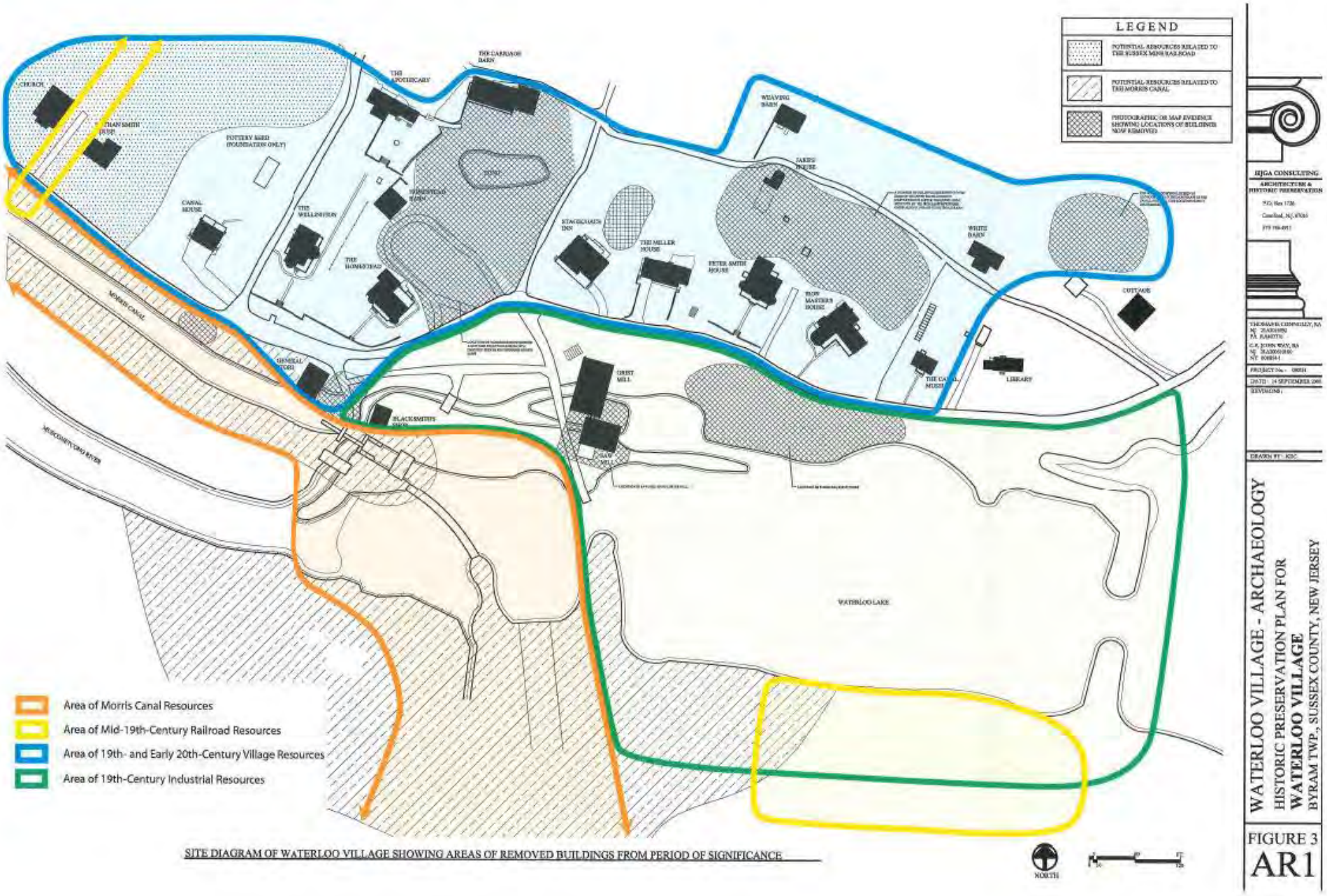

S-1/M-1 Morris Canal
S-1a. Canal Prism and Towpath (watered)
S-1b. Guard Lock
S-1c/M-1b Canal Company Dam (c. 1830)
S-1d/M-1d Towpath Bridge Site
M-1c. Inclined Plane 4 West (c. 1830; modified c. 1850)
M-1d. Tailrace (c.1850)
M-1e. Powerhouse Site (c.1850)
M-1f. Headrace Flume (c. 1850)
M-1g. Bypass Channel (c. 1850)
M-1h. Plane Tender's House (c. 1830)
M-1i. Canal Prism and Towpath (c. 1831)
M-1j. Canal Boat Site
M-34 Poyer House and Outbuilding Sites
S-35b/M-35b Truss Bridge Site?
M-35c Hackettstown-Waterloo Road
M-35d Stanhope-Waterloo Road?
M-36 Stone Foundation
M-12 Waterloo Ice Company
M-12a. Ice Company Dam
M-12b. Ice Company Ponds
M-12c. Ice Company Ice Houses
M-12d. Ice Company House/Office (c. 1900)
M-12e. Ice Company Railroad Sidings (c. 1890)
M-10 Sussex Railroad
M-10a. Sussex Mine Railroad (1861)
M-10b. Sussex Railroad (1853)
M-10c. Sussex Railroad Bridge over Stanhope-Waterloo Road (1853)
M-10d. Sussex Railroad Bridge over Inclined Plane (1853)
M-10e. Sussex Railroad Siding Ore Chute
M-10f. Ore Chutes (1853)
M-10g. Sussex Railroad Bridge over Musconetcong (1853)
0
500
Feet
N
Waterloo Village Historic District Boundary (1977)
Waterloo Village Historic District Boundary Increase (2012)

FIGURE 2

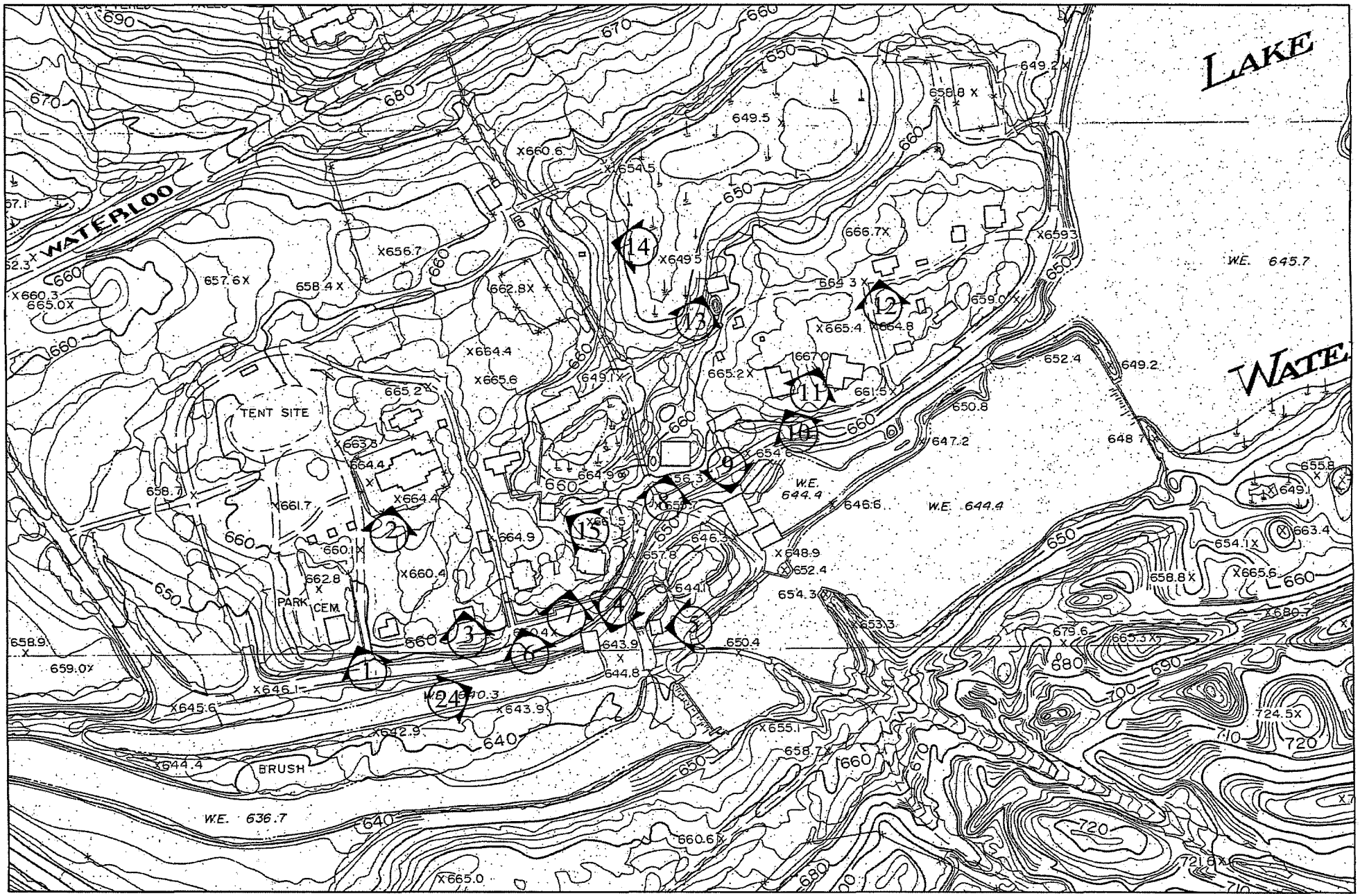


SITE DIAGRAM OF WATERLOO VILLAGE SHOWING AREAS OF REMOVED BUILDINGS FROM PERIOD OF SIGNIFICANCE

Waterloo Village HD (Boundary Increase #1 and Additional Documentation)
Sussex County, New Jersey

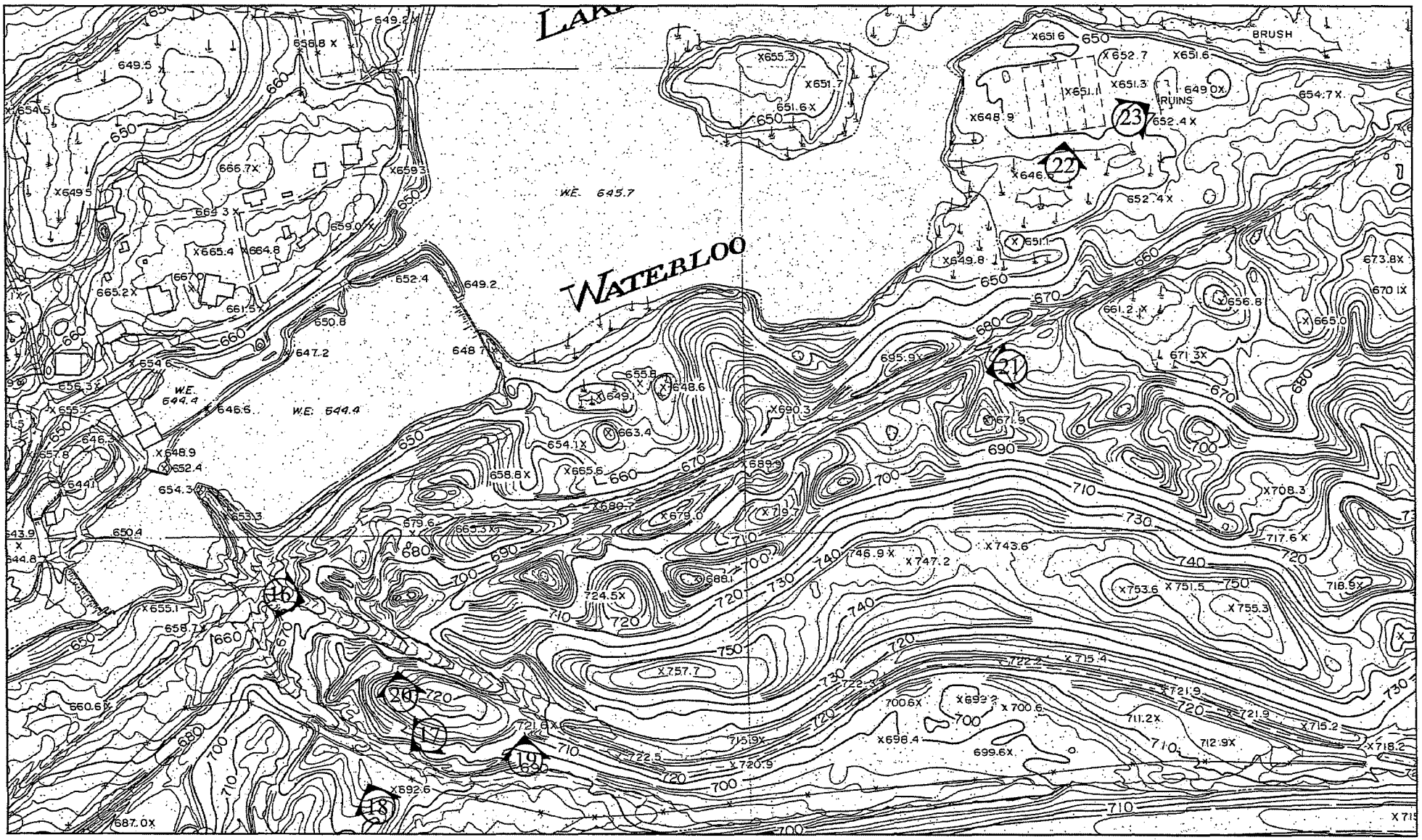
Boundary Comparison

FIGURE 8
Waterloo Village Boundary Increase #1
Sussex County Architectural Resources Key
Not to Scale - Base map adapted from Bing Maps



Waterloo Village Boundary Increase #1

Photo Key 1A - Sussex County Resources



Waterloo Village Boundary Increase #1

Photo Key 1B - Morris County Resources

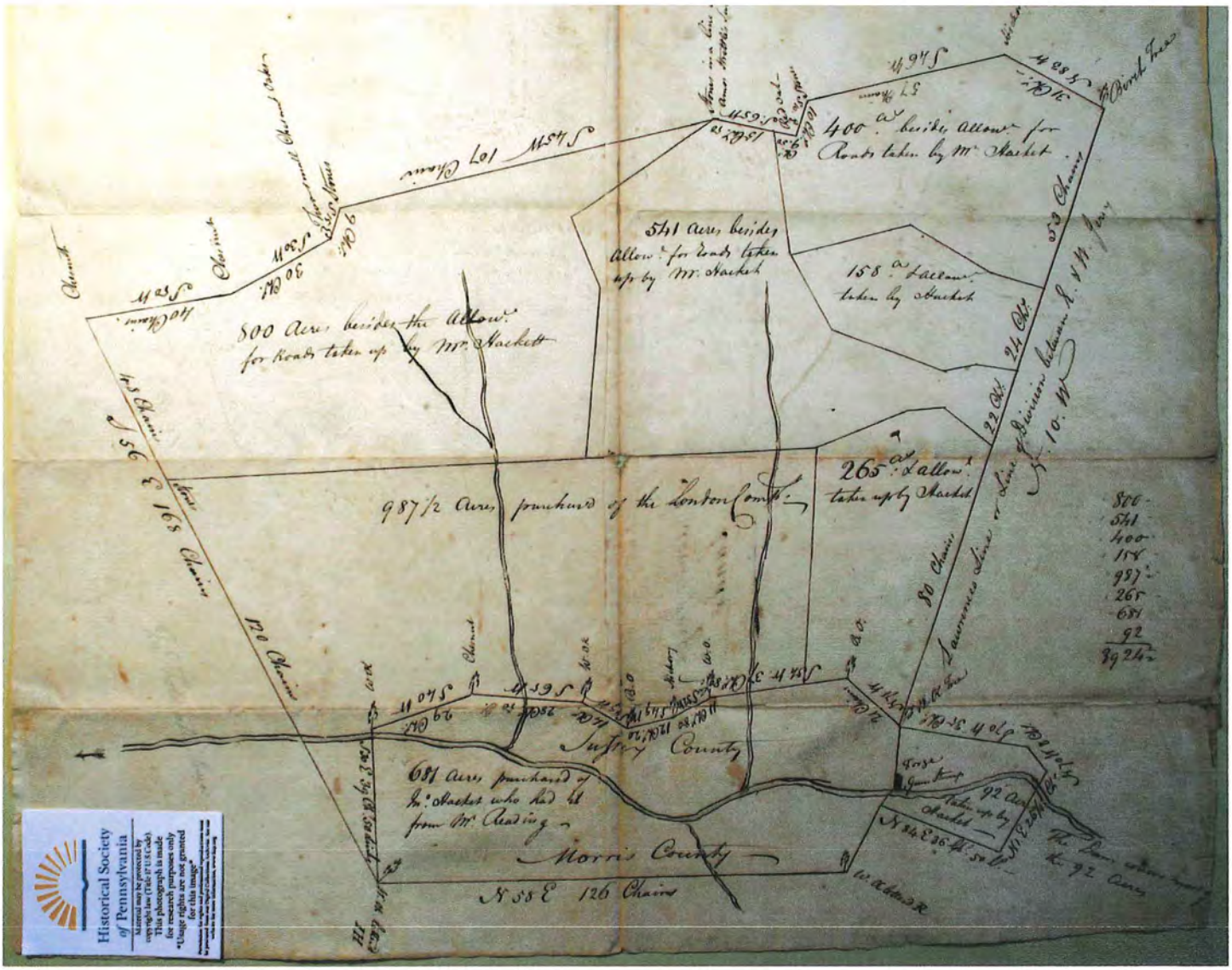


Figure 4

Andover Forge, Undated

Credit: Flat File 250.1 at the Historical Society of Pennsylvania

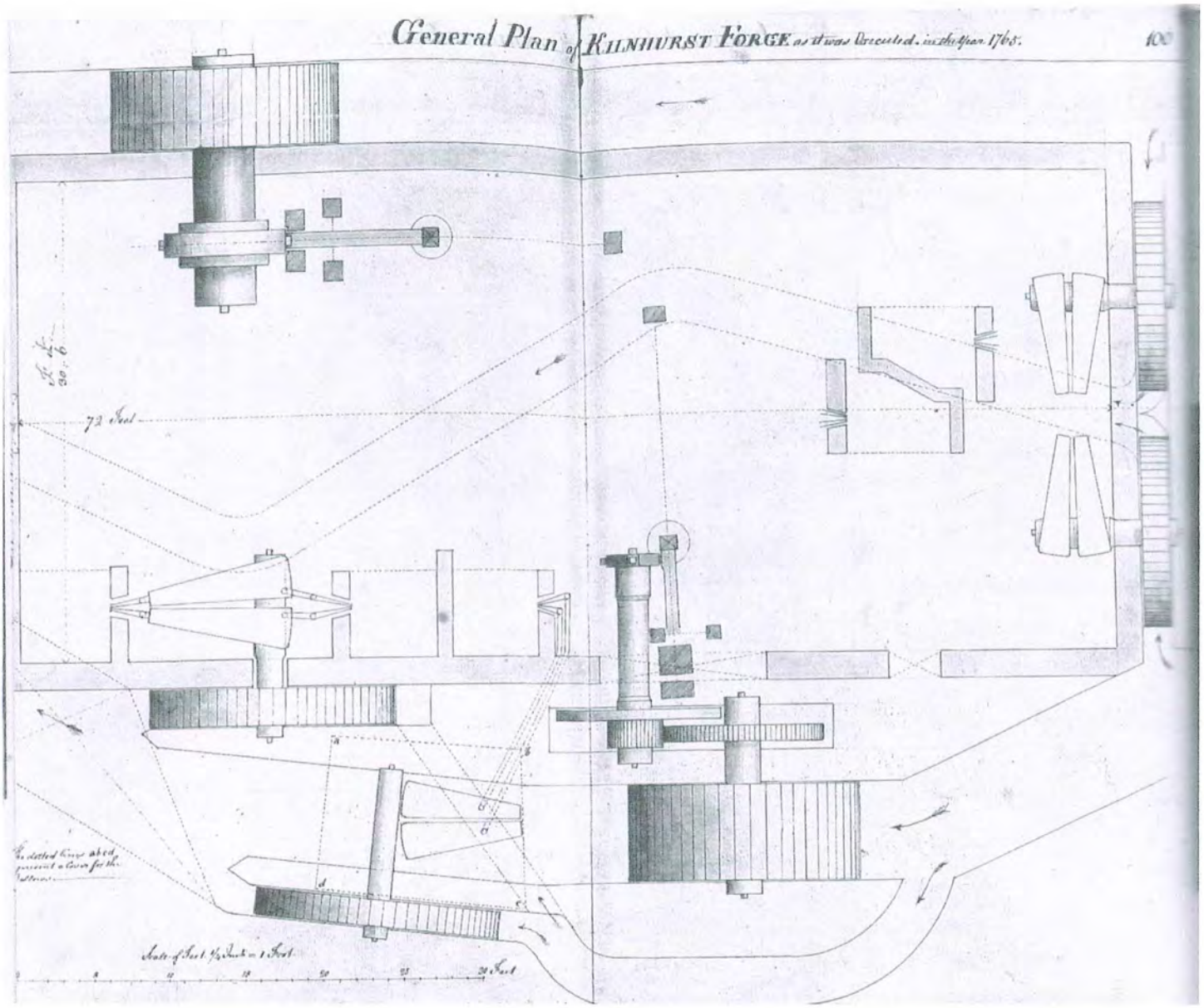
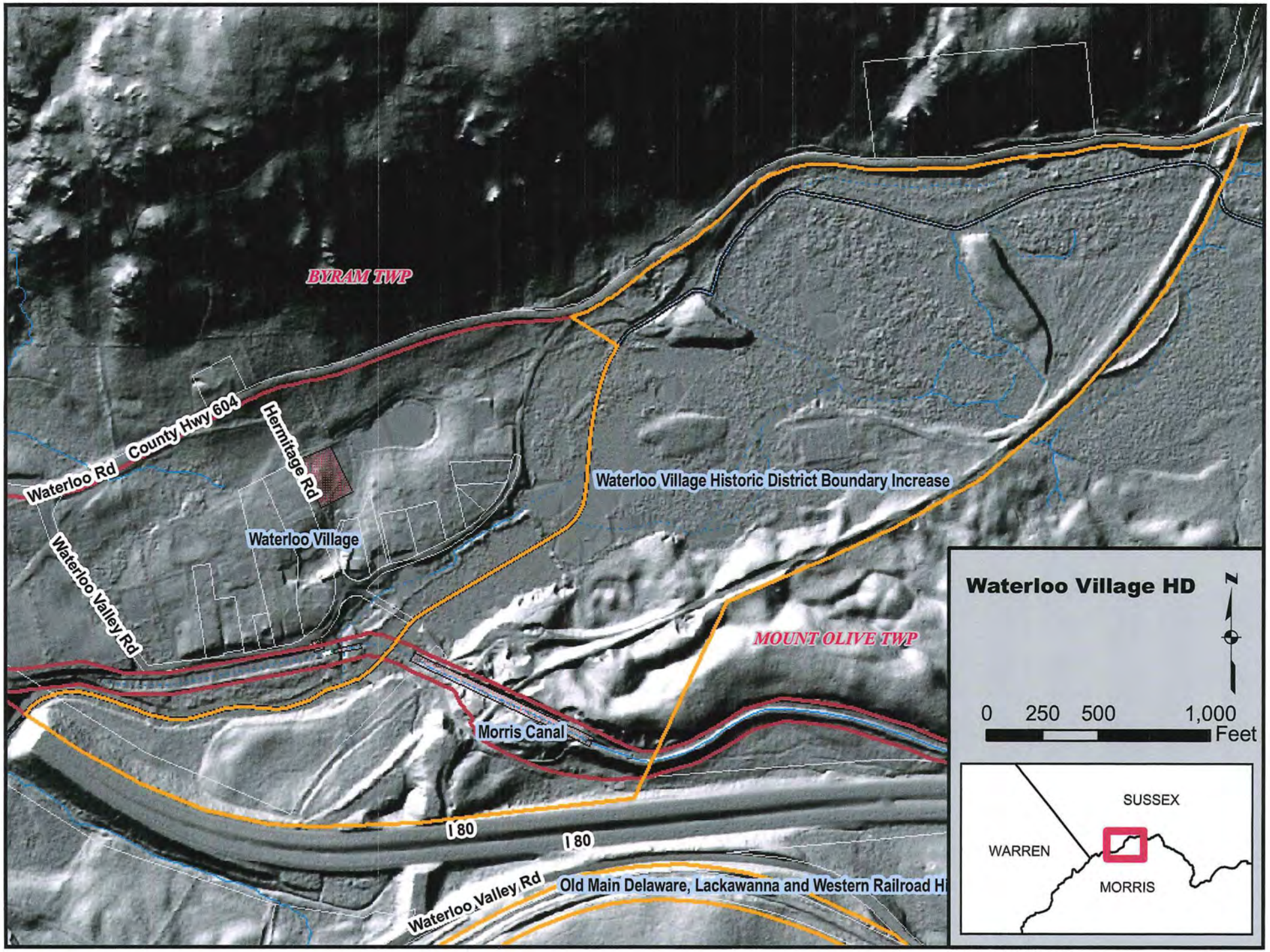


Figure 5

General Plan of Kilnhurst Forge as it was executed, Ground plan, 1:48, Ink wash. 1765.

Credit: Royal Society, London, England. John Smeaton, Volume Two, Folio 99v & 100. n.d.



Drawn 4/2/12, HPO

FIGURE 6

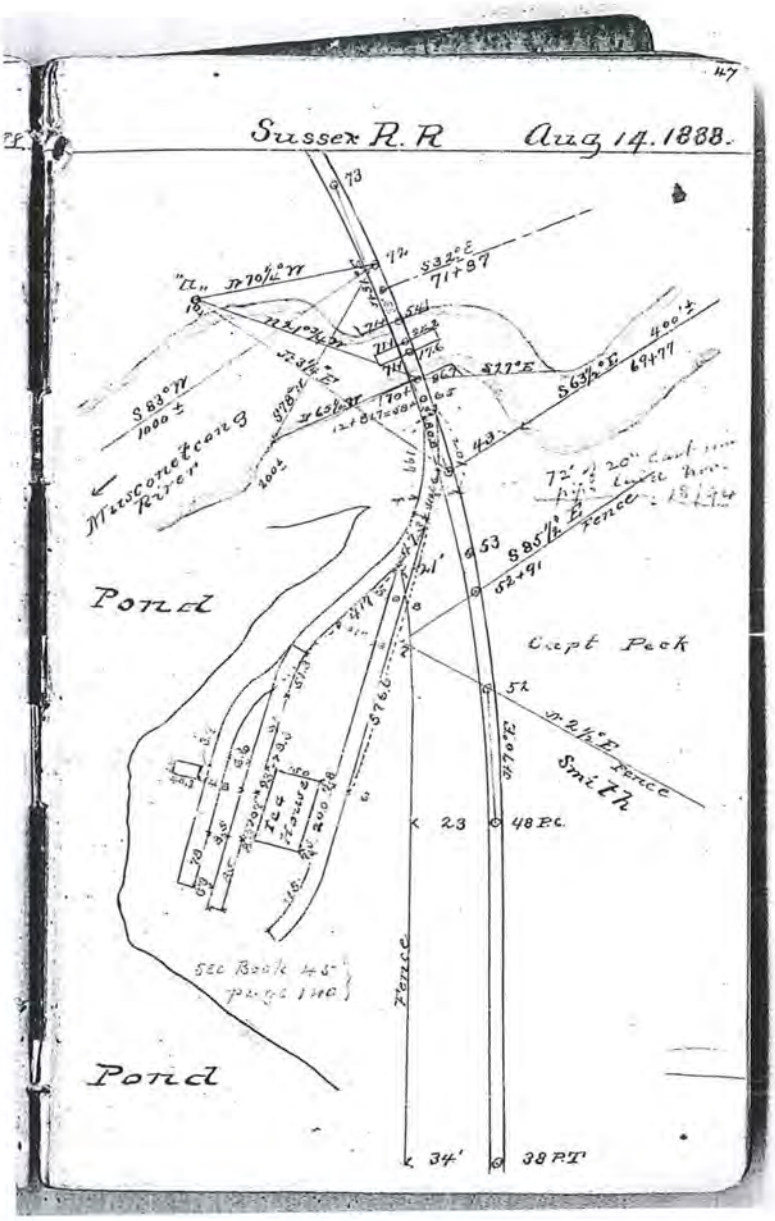
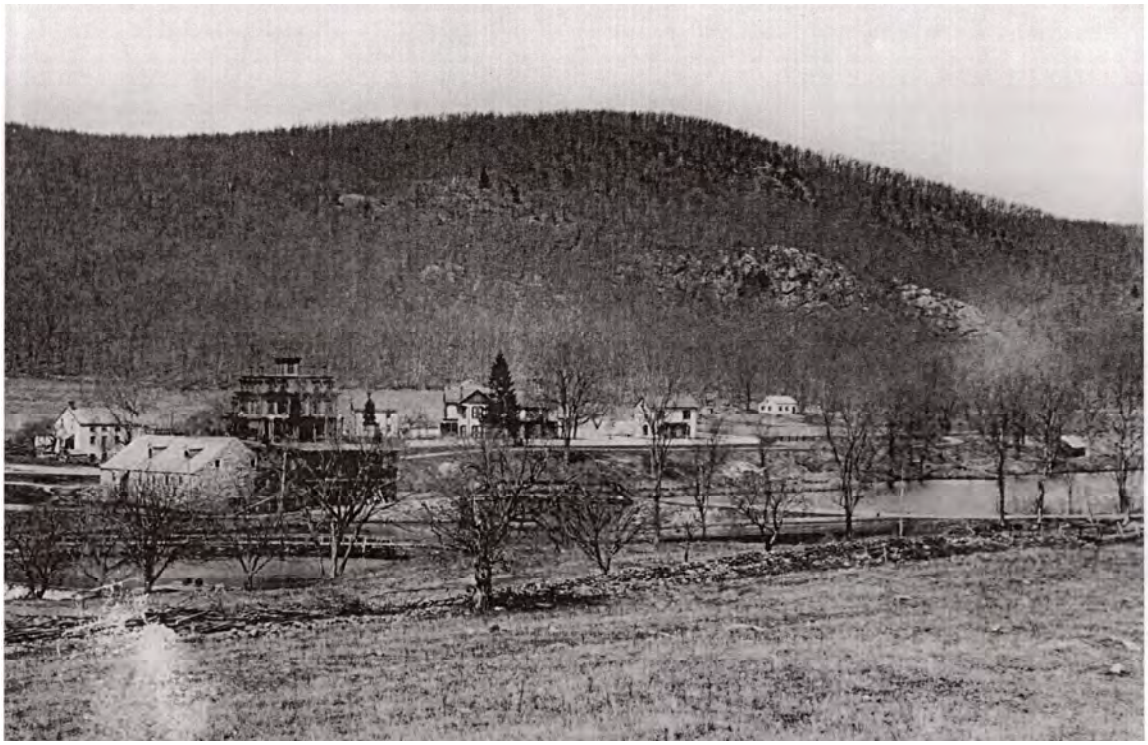


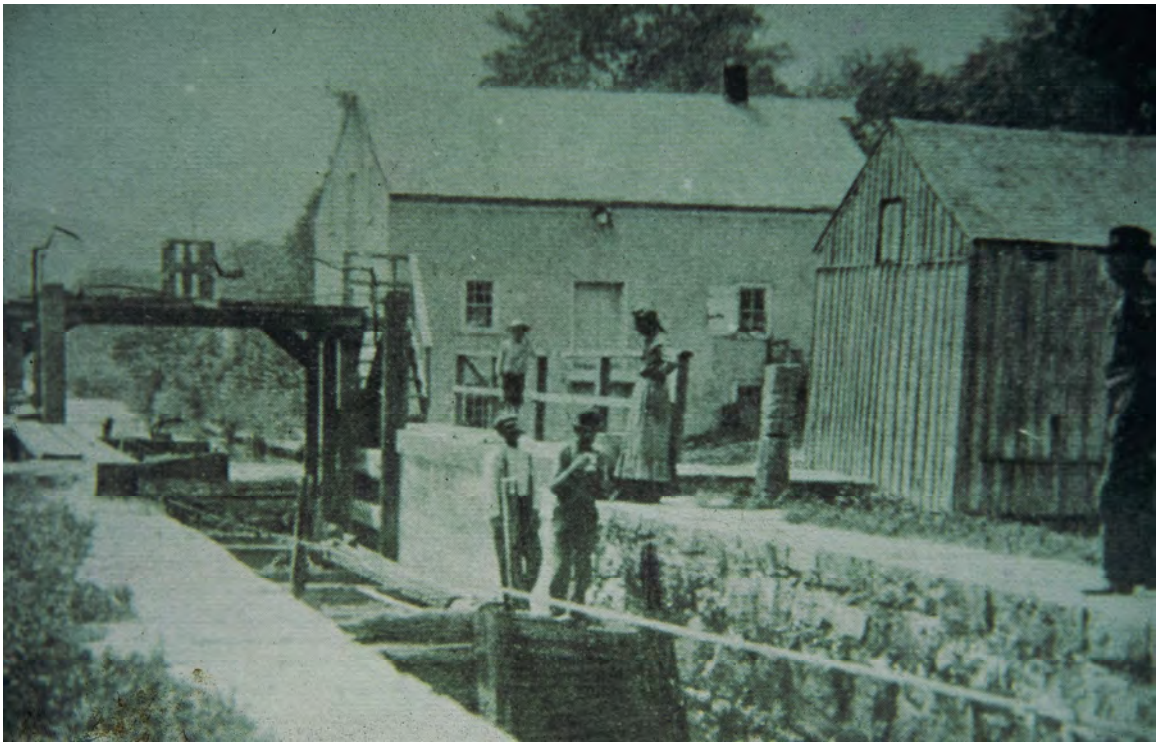
Figure 7

Sussex Railroad and Ice Plant, 1888

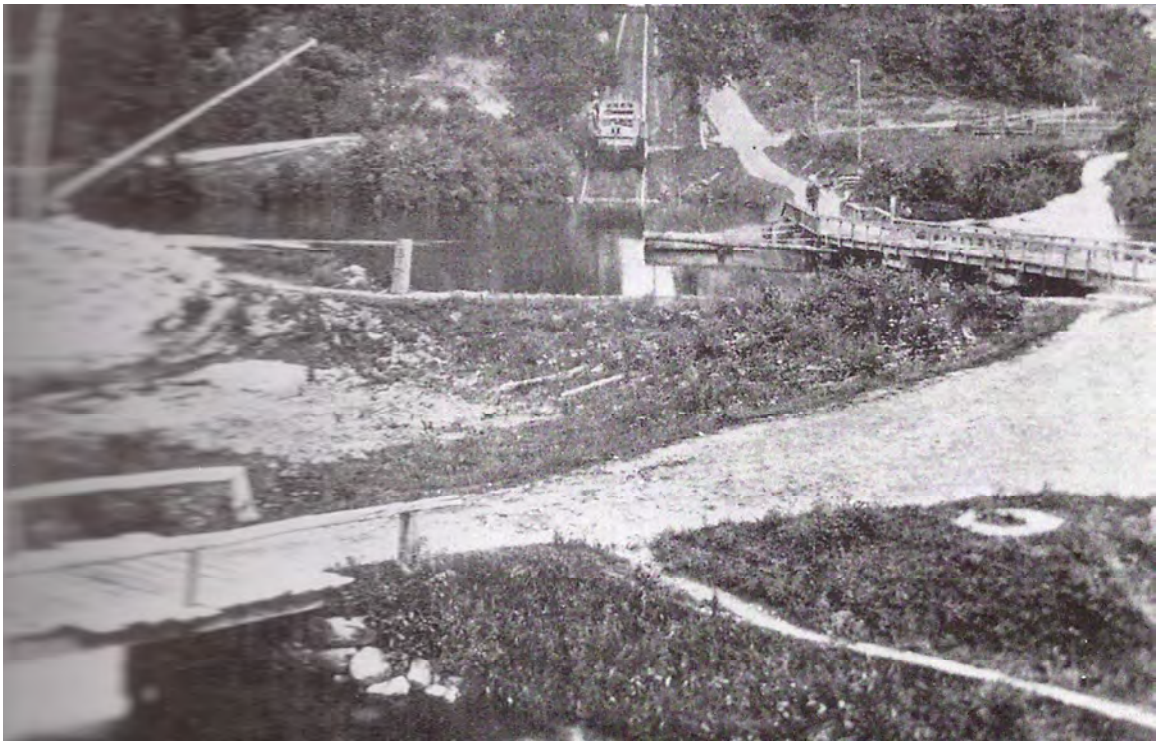
Credit: Sussex Railroad Field Books, p. 47, August 14, 1888. Manuscripts on file, Steamtown National Historic Site, Scranton, Pennsylvania.



Waterloo Village_Historic Image_0001



Waterloo Village_Historic Image_0002



Waterloo Village_Historic Image_0003

Waterloo Village_Historic Image_0004

Waterloo Village_Historic Image_0005

Waterloo Village_Historic Image_0006

Waterloo Village_Historic Image_0007


SMITH'S STORE

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Waterloo Village (Boundary Increase)

MULTIPLE NAME:

STATE & COUNTY: NEW JERSEY, Sussex

DATE RECEIVED: 3/13/15 DATE OF PENDING LIST: 4/08/15
DATE OF 16TH DAY: 4/23/15 DATE OF 45TH DAY: 4/28/15
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 15000176

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	N	SAMPLE:	N	SLR DRAFT:	N	NATIONAL:	N

COMMENT WAIVER: N

✓ ACCEPT ___ RETURN ___ REJECT 4.28.15 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in
The National Register
of
Historic Places

RECOM./CRITERIA_____

REVIEWER_____ DISCIPLINE_____

TELEPHONE_____ DATE_____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

Proj. #12-0924
Chrono #:B2015-052

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
NATURAL & HISTORIC RESOURCES
Office of the Assistant Commissioner
MAIL CODE 501-03A
PO Box 420
Trenton, New Jersey 08625
609-292-3541/ FAX: 609-984-0836

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

February 5, 2015

Paul Loether, Chief
National Register of Historic Places
National Park Service
Department of the Interior
Washington, D.C. 20240

Dear Mr. Loether:

The enclosed disk contains the true and correct copy of the nomination for the Waterloo Village (Boundary Increase #1 and Additional Documentation), Byram Township, Sussex County and Mt. Olive Township, Morris County

This nomination has received unanimous approval from the New Jersey State Review Board for Historic Sites. All procedures were followed in accordance with regulations published in the Federal Register.

Should you want any further information concerning this application, please feel free to contact Daniel D. Saunders, Administrator, New Jersey Historic Preservation Office, Mail code 501-04B, P.O. Box 420, Trenton, New Jersey 08625-0420, or call him at (609) 633-2397.

Sincerely,

Rich Boornazian
Deputy State Historic
Preservation Officer